



THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

NEW SERIES.

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Suggestions for Farmers.

Changes in Permanent Pasture or Meadow.

EDITORS OF THE CULTIVATOR—I am aware that the numerous correspondents of *The Cultivator* keep its pages so well stored with original communications, as quite generally to preclude the publishing of lengthy extracts from other sources. But the following remarks of Prof. JOHNSTON, upon "Permanent Pasture or Meadow," evince so much accurate and extensive observation, and, withal, so entirely correspond with the experience of intelligent farmers, that they may well find a place, at some time, in your columns. With this view, I have transcribed the accompanying extract, and if you think as I do about it, just present it to your readers whenever you find room for it, and I doubt not, the perusal will interest them. F. HOLBROOK.

When land is laid down to permanent grass, it undergoes a series of changes, which have frequently arrested attention, and which, though not difficult to be understood, have often appeared mysterious and perplexing to practical men. Let us consider these changes.

a. When grass seeds are sown for the purpose of forming a permanent sward, a rich crop of grass is obtained during the first, and perhaps also, the second year, but the produce, after three or four years, lessens, and the value of the pasture diminishes. The plants gradually die and leave blank spaces, and these again are slowly filled up by the sprouting of seeds of other species, which have either lain long buried in the soil or have been brought thither by the winds.

This first change, which is almost universally observed in fields of artificial grass, arises in part from the change which the soil itself has undergone during the few years that have elapsed since the grass seeds were sown, and in part from the species of grass selected not being such as the soil, at any time, could permanently sustain.

b. When this deterioration, arising from the dying out of the sown grasses, has reached its utmost point, the sward begins gradually to improve, natural grasses suited to the soil, spring up in the blank places, and from year to year, the produce becomes greater and greater, and the land yields a more valuable pasture. Practical men often say that to this improvement there are no bounds, and that the older the pasture, the more valuable it becomes.

But this is true only within certain limits. It may prove true for the entire currency of a lease, or even for the life-time of a single observer, but it is not generally true. Even if pastured by stock only, and never mown—the improvement will at length reach its limit or highest point, and from this time the value of the sward will begin to diminish.

c. This, again, is owing to a new change which has come over the soil. It has become, in some degree,

exhausted of those substances which are necessary to the growth of the more valuable grasses—less nutritive species, therefore, and such as are less willingly eaten by cattle, take their place.

Such is the almost universal process of change which old grass fields undergo, whether they be regularly mowed, or constantly pastured only—provided they are left entirely to themselves. If mown, they begin to fail the sooner, but even when pastured they can be kept in a state of full productiveness only by repeated top-dressings, especially of saline manures—that is, by adding to the soil those substances which are necessary to the growth of the valuable grasses, and of which it suffers a yearly and unavoidable loss. Hence the rich grass lands of our fathers are found now, in too many cases, to yield herbage of little value. Hence, also, in nearly all countries, one of the first steps of an improving agriculture, is to plow out the old and failing pastures, and either to convert them permanently into arable fields, or, after a few years' cropping and manuring, again to lay them down to grass.

But when thus plowed out, the surface soil upon old grass land is found to have undergone a remarkable alteration. When sown with grass seeds, it may have been a stiff, more or less grey, blue, or yellow clay—when plowed out, it is a rich, brown, generally light and friable vegetable mould. Or when laid down it may have been a pale-colored, red, or yellow sand or loam. In this case, the surface soil is still, when turned up, of a rich brown color—it is lighter only, and more sandy than in the former case, and rests upon a subsoil of sand or loam, instead of one of clay. It is from the production of this change that the improvement caused by laying land down to grass principally results. In what does this change consist? and how is it effected?

If the surface soil upon stiff clay lands, which have lain long in grass, be chemically examined, it will be found to be not only much richer in organic matter, but often also poorer in alumina than the soil which formed the surface when the grass seeds were first sown upon it. The brown mould which forms on lighter lands will exhibit similar differences when compared with the soil on which it rests; but the proportion of alumina in the latter being originally small, the difference in respect to this constituent, will not be so perceptible.

The effect of this change on the surface soil is in all cases to make it more rich in those substances which cultivated plants require, and therefore more fertile in corn. But strong clay lands derive the further important benefit of being rendered more loose and friable, and thus more easily and more economically cultivated.

The mode in which this change is brought about is as follows:—

1. The roots, in penetrating, open and loosen the subjacent stiff clay. Diffusing themselves everywhere, they gradually raise, by increasing the bulk of the surface soil. The latter is thus converted into a mixture

of clay and decayed roots, which is of a dark color, and is necessarily more loose and friable than the original or subjacent unmixed clay.

2. But this admixture of roots affects the chemical composition, as well as the state of aggregation of the soil. The roots and stems of the grasses contain much inorganic—earthy and saline—matter, which is gathered from beneath wherever the roots penetrate, and is by them sent upwards to the surface. A ton of hay contains about 170 lbs. of this inorganic matter. Suppose the roots to contain as much, and that the total annual produce of grass and roots together amounts to four tons, then about 680 lbs. of saline and earthy matters are every year worked up by the living plants, and in a great measure permanently mixed with the surface soil. Some of this, no doubt, is carried off by the cattle that feed, and by the rains that fall, upon the land—some remains in the deeper roots, and some is again, year after year, employed in feeding the new growth of grass—still a sufficient quantity is every season brought up from beneath, gradually to enrich the surface with valuable inorganic matter, at the expense of the soil below.

3. Nor are mechanical agencies wanting to increase this natural difference between the surface and the under soils. The loosening and opening of the clay lands by the roots of the grasses, allow the rains more easy access. These rains gradually wash out the fine particles of clay that are mixed with the roots, and carry them downwards, as they sink towards the subsoil. Hence the brown mould, as it forms, is slowly robbed of a portion of its alumina, and is rendered more open, while the under soil becomes even stiffer than before. This sinking of the alumina is in a great measure arrested when the soil becomes covered with so thick a sward of grass as to break the force of the rain-drops, or of the streams of water by which the land is periodically visited. Hence the soil of some rich pastures contains as much as 10 to 12, of others as little as 2 to 3 per cent. of alumina.

4. The winds also here lend their aid. From the naked arable lands, when the weather is dry, every blast of wind carries off a portion of the dust. This it suffers to fall again, as it sweeps along the surface of the grass fields—the thick sward arresting the particles and sifting the air as it passes through them. Everywhere, even to remote districts and to great elevations, the winds bear a constant *small* burden of earthy matter; but there are few practical agriculturists who, during our high winds, have not occasionally seen the soil carried off in large quantities from their naked fields. Upon the neighboring grass lands this soil falls as a natural top-dressing, by which the texture of the surface is gradually changed, and its chemical constitution altered.

5. Another important agency also, must not be overlooked. In grass lands insects, and especially earth-worms abound. These almost nightly ascend to the surface, and throw out portions of finely divided earthy matter. On a close shaven lawn the quantity thus spread over the surface in a single night often appears surprising. In the lapse of years, the accumulation of the soil from this cause must, on old pasture-fields, be very great. It has often attracted the attention of practical men,* and so striking has it appeared to some, that they have been inclined to attribute to the slow but constant labor of these insects, the entire formation of the fertile surface soils over large tracts of country.

I have directed your attention to these causes chiefly

* The permanence of a fine carpeting of rich and sweet grass upon a portion of his farm, is ascribed (by Mr. Purdie) to "the spewings of the worms, apparently immensely numerous, which necessarily act as a rich top-dressing."—Prize Essays of the Highland Society, p. 191.

in explanation of the changes which by long-lying in grass, the surface of our stiff clay land is found to undergo. But they apply equally to other soils also—the only difference being that, in the case of such as are already light and open, the change of texture is not so great, and therefore does not so generally arrest the attention.

Upon this subject I may trouble you further with two practical remarks—

1. That the richest old grass lands—those which have remained longest in a fertile condition—are generally upon our strongest clay soils. This is owing to the fact that such soils naturally contain, and by their comparative impermeability retain, a larger store of those inorganic substances on which the valuable grasses live. When the surface soil becomes deficient in any of these, the roots descend further into the subsoil, and bring up a fresh supply. But these grass lands are not on this account exempt from the law above explained, in obedience to which all pastured lands, when left to nature, must ultimately become exhausted. They must eventually become poorer; but in their case the deterioration will be slower and more distant, and by judicious top-dressings may be still longer protracted.

2. The natural changes which the surface soil undergoes, and especially upon clay lands when laid down to grass, explain why it is so difficult to procure, by means of artificial grasses, a sward equal to that which grows naturally upon old pasture lands. As the soil changes upon our artificial pastures, it becomes better fitted to nourish other species of grass than those which we have sown. These naturally spring up, therefore, and cover the soil. But these intruders are themselves not destined to be permanent possessors of the land. The soil undergoes a further change, and new species again appear upon it. We cannot tell how often different kinds of grass thus succeed each other upon the soil, but we know that the final rich sward which covers a grass field, when it has reached its most valuable condition, is the result of a long series of natural changes which time only can bring about.

The soil of an old pasture field, which has been plowed up, is made to undergo an important change both in texture and chemical constitution, before it is again laid down to grass. The same grasses, therefore, which previously covered it, will no longer flourish, even when they are sown. Hence the unwillingness felt by practical men to plow up their old pastures—but hence, also, the benefit which results from the breaking up of such as are old, worn-out, or covered with unwholesome grasses. When again converted into pasture land, new races appear, and a more nourishing sward is produced.

Systematic Agriculture.

Importance of Farm Accounts.

EDITORS CULTIVATOR—With a desire to make my subject more attractive to my brother farmers, a few facts have been presented in connexion with the leading and most important implements and machines used in our farming operations—facts which exhibit the advantages we possess at the present day, over those of our predecessors, in a strong light; and it seems to me so conclusive, that no prudent man, with a farm of over one hundred acres, should omit the constant use of them in their proper season.

Figures have been used to show the benefits actually derived by farmers in this region, and though the wages may vary in different localities, in some degree affecting the results; yet among thinking, careful men,

who are not disposed to be exorbitant in the payment of wages, the figures and calculations presented, will probably be a guide to safe resolutions. It must not be expected that the farmer who permits stumps and rocks to encumber his grounds, can derive the necessary benefits offered by the use of the Reaper, or Seed Sower, or in short, any farm implement, in the same proportion as the farmer, who by perseverance has cleared his farm of these encumbering and wasteful foes. And it may be useful to repeat that, the very high rate of wages paid in this state and country for agricultural labor, as compared with most other nations, ought and must compel us, to seek for and use every well-made, simple machine that can bring the produce of our fields to yield a profit, in some degree equal to the profits of other professions and trades. This can now be done with the implements before described, if judiciously applied, and it makes good one of the principles with which these suggestions were started, viz:—that the power of a horse is equal to the power of six men, and by combination with farm machinery, this motor, (the horse) is equal to the combined efforts of twelve, or even twenty men in cultivating the earth.

The subject of farm machinery need not be pursued farther, though many excellent implements have not been named,—we may all see and understand that the same principles are applicable to each.

It may be urged as an excuse for adhering to old and sluggish practices and habits, that the expenditure for the improved implements is onerous at the outset; true, but let us remember that *extraordinary expense* must find its *limit* in the value or worth of the object, and the statements made by me in the several communications to "*The Cultivator*," will, it is believed, easily lead to the reasonable estimates of the values desired.

And here we may as well allude to another and vastly important motive for the study of Order, System and Economy, and that is "*our expenses*." Men are very apt to hesitate at the price of a farm implement, but allow *ordinary expenses* to be incurred until the day of settlement, when an uneasy sense of surprise is manifested at the unexpected amount.

This often arises from the too convenient, but too seductive system of having store credits; a system of unintentional extravagance, which is rarely or never checked by the salutary, and I may say indispensable money saving system, of keeping an exact account of receipts and expenditures, from a bushel of grain to the cost of a plow-bolt. An *easy* system, by which we can see and know at any hour, the exact measure of our expenses—and of the results of our labor—by which we can with comfortable assurance encounter an extraordinary expense, or indulge our families in further ordinary comforts, while at other times, we can firmly deny any and every indulgence as our monitor, the "*Farm Book*," will most certainly indicate any existing necessity. In every vocation of life, we find men who are afraid to examine closely into their business accounts, and neglect them, lest melancholy should oppress them, or that some need for unwelcome change should appear; others feel as if the plow handle and the reins, unfitted the hand and head for the methodical arrangement of this class of facts. To the first it must be observed that a wound most certainly does there exist, needing cure, and *that* cure cannot and will not be effected, but by close searching and probing. To the second, it will be apparent upon reflection, that it is as easy for the hand to record the cost of a plow bolt, as to calculate the value of corn when taken to market. It is idle, therefore, to attempt any excuse, if the object is useful or desirable.

Be assured that it is not the lot of man to be profuse in expenses, and with the best in our land it is a truth, perhaps not agreeable, that, "if we are plentiful at our table, we must be saving in the stable." How then

can we establish a scale of expenditure which shall yield us all proper comforts, and without stint of measure to our stock?—Farm accounts, methodically, simply, and plainly arranged, at least once in every week, will infallibly give to every farmer the reliable truth, be it favorable or unfavorable. It necessarily gives him abiding confidence in his work, or it leads him with certainty to a remedy for an evil, which cannot be hidden from him.

Many may here exclaim, how easy to preach, but how difficult to practice! Not so, and I will endeavor to show that the practice is easier than preaching. Thus: Let the farmer have three books—

- 1st. A *time book*, in which is noted daily all the work of his farm, and the cost of the labor thereon.
- 2d. A *diary*, in which he writes, at least once a week, the expenditure and receipts of every kind and nature connected with his farm.
- 3d. An *account book*, (generally called a *leger*,) into which he enters on one side all the expenses incurred by any particular crop or object, and on the other, the receipts obtained from such crop or any object.

These entries being carried on once a week, from his diary into his account book.

This simple arrangement will, at any moment, on reference to his account book, exhibit to his eye, the cost of any particular object, of any crop; and at the end of the season, if he arranges the balances of the several accounts in proper order, it will show him the profit or the loss which has attended his labors. Under any circumstances of progress, or even of loss, the man who thus keeps a precise knowledge of his doings, must ever sleep soundly, and be blessed with a contented and happy frame of mind. He can enjoy and give enjoyment from his increasing stores; or, if unpropitious seasons or events beyond his control assail him, he sees the full bearing of his condition, he knows at once, that having done his duty, he can confidently and cheerfully rely, knowing that adversity has its comforts and hopes, leading, under Providence, to greater benefits than are yet evident to his senses.

As a class of men, it may, I think, be asserted, that none are less subject to loss than the farmer; because speculation and trading, do not and ought not ever to interfere with his higher duties; he knows that tilling the earth is the most natural method for obtaining wealth, for it is the natural blessing bestowed by our mother earth, for the care and attention we proffer to her. The returns may be slow, but they are sure, and far more sweet and enduring than the gains of any bargaining or traffic. As a general rule, then, a farmer will always find pleasure and comfort in consulting his farm-books of account; he will inculcate a habit of generous frugality, enriching the mind as well as the purse.

Without pretending to offer the best system of farm accounts, I venture to add the form of books I have seen, and which have been found satisfactory thus far to several Seneca county farmers. One week's work is here carried through the books, and though they may need more explanation, yet it is hoped that sufficient is given to lead all our thinking farmers to a full comprehension of this deeply important system, without which no farmer can possibly know his true condition, nor whether he is dealing justly with himself and his neighbors.

The following forms embrace the whole work done on a farm during one week, from the 11th to the 16th June, and the actual expense for the week is carried in to the diary, is charged to the separate objects and thence posted into the account book. At the end of the season, each account will show to the farmer its true condition, whether it be profitable or losing.

JUNE, 1849.								Rate pr day.	Rate pr mo.	Rate pr yr.	Cost for this week	Monday, June 11.	Tuesday, June 12.	Wednesday, June 13.	Thursday, June 14.	Friday, June 15.	Saturday, June 16.	
NAMES.	Mon.	Tu's.	We'd.	Th'r.	Fri.	Sat.	Total	Cents.	\$	\$	\$							
J. Mahan,.....	1	1	1	1	1	1	6	38.16	10 00	120	2 30	Mending road 'till 10 a. m. Weeding Barley.	Attending the sheep-shearers.	Attending, marking, and trimming the sheep.	Mending the farm road.	Mending the road	Hoeing corn.	
J. Atkins,.....	1	1	1	1	1	1	6	34.50	9 00	108	2 07	Weeding Barley.	Hoeing garden.	Hoeing garden.	Mending farm road.	Hoeing corn.	Hoeing corn.	
A. Kirkwood,....	1	1	1	1	1	1	6	30.67	8 00	96	1 84	Weeding Barley.	Attending the shearers.	Attending the sheep.	Mending farm road.	Hoeing corn.	Hoeing corn.	
J. Gilbert,.....	1	1	1	1	1	1	6	30.67	8 00	96	1 84	Weeding Barley.	Shearing sheep.	Shearing sheep.	Mending farm road.	Hoeing corn.	Hoeing corn.	
H. Ormond,.....	1	1	1	1	1	1	\$1	\$1	..	1 00	..	Shearing sheep.	Shearing sheep.	Shearing sheep.	Altering lambs, &c.	Hoeing corn.	Hoeing corn.	
J. Herbert,.....	1	1	1	1	1	1	2	\$1	2 00	2 12	2 12	Preparing sheep skins, &c. &c.	Rolling wool.	Shearing and trimming hoofs.	Shearing and trimming hoofs.	Hoeing corn.	Hoeing corn.	Hoeing corn.
L. Thompson,.....	1	1	1	1	1	1	54	38.46	10 00	120	2 12	Preparing sheep skins, &c. &c.	Preparing pens.	Preparing pens.	Rolling wool.	Hoeing corn.	Hoeing corn.	Hoeing corn.
T. Thompson,....	1	1	1	1	1	1	54	31.95	8 33	100	1 66	Preparing pens.
	<u>Days, . . 371</u>								<u>\$14 83</u>									
Thermom.	52	70	62	56	69	65	56	76	69	70	84	74	Hoeing corn with horse hoe.	Hoeing corn with horse hoe.	Hoeing corn.	Hoeing corn.	Hoeing corn.	Hoeing corn.
Barom.	29.6	..	29.5	29.5	29.5	29.5	29.5	29.4	29.4	29.3	29.3	29.3	Choring.	Choring.	Choring.	Choring.	Choring.	Choring.
Weather,	Clear.			Cloudy.	Rain.		Hazy.	Wind.		Cloudy.	Rain.							

Time, expense, and occupation of persons employed on the Auchness Farm.—1849.

**DIARY—Containing the entries of the farm business
for one week.**

Charge 1. Roads for repairs this week, as per time book...	\$ 2 20
2. Field No. 4—for weeding barley, as per time book,	1 15
3. Sheep—for preparing pens, for shearing, rolling the wool, altering lambs, and trimming hoofs,	7 25
4. Indian corn—for hoeing this week,	3 54
5. Garden—for hoeing this week,.....	69

Correct as per time book, \$14 83

Credit	20. J. Mahan, for one week's work per time book,	\$2 30
	25. J. Atkins, "	2 07
	30. A. Kirkwood, "	1 84
	35. J. Gilbert, "	1 84
	80. Cash paid to shearers, (161 sheep,)	3 00
	40. L. Thompson for 1 week's work per time book,	2 12
	50. T. Thompson, "	1 66

As per time book,..... \$14 83

80. Cash.	<i>Dr.</i> to	(3.)	Sheep.
For 586 pounds of wool at 32 c. per lb.,....			\$187 52
85. Expenses.	<i>Dr.</i> to	(80.)	Cash.
Paid this week for groceries, per bill,....			\$1 75
Paid for a plow point,.....			31
One shoe, set on horse "Bob,".....			10

The figures preceding the names of the several accounts refer to the page of the account book, where they will severally be found.

ACCOUNT Book, or LEGER—Exhibiting the farm business for one week, distributed under the proper accounts.

1849. Roads of the Farm. folio 1.
June 16. Repairs,..... \$2 20

1849.	<i>Field No. 4-Barley.</i>	folio 2.
June 16. Weeding Barley,		\$1 15
1849.	<i>Sheep Account—flock 161.</i>	folio 3.
June 16. Shearing 161 sheep, rolling the wool, altering		

June 16. Shearing for sheep, rolling the wool, altering lams, &c., &c.,	\$7 25
Cash received for 586 lbs of wool, at 32 c.,	187 52
1849.	Indian Corn.
	folio 4.

June 16. Hoeing corn this week,.....	\$3 54
1849. Garden.	folio 5.
June 16. Hoeing this week,.....	69
John Mahan	folio 90

John Mahan,	folio 20.
June 16. For week's work,	\$2 30
James Atkins,	folio 25.
June 16. For week's work,	2 07

June 15. For week's work,	1 00
<i>A. Kirkwood,</i>	folio 30.
June 16. For weeks' work,	1 84
<i>John Gilbert,</i>	folio 35.

June 16. For week's work,	1 84
L. Thompson,	folio 40.
June 16. For week's work,	2 12
R. Thompson,	folio 50.

<i>P. Thompson,</i>	folio 50.
June 16. For week's work,	1 66
1849. <i>Cash Account.</i> folio 80.	
June 16. Received for wool,	187 52

June 16
1849

Paid for sundries,.....	2 16
Paid sheep shearers,.....	3 00

Expense Account folio 85

1849. *Expense Account.* 1010 5d. 2 16
June 16. Paid for Groceries, &c.,.....

I fear, Messrs. Editors, that I have made an unreasonable demand upon your columns this month, but considering *Order* and *System* as the life of business, it cannot, perhaps, be too strongly urged or illustrated, and sincerely do I wish that my remarks might provoke some more powerful pen to place these cardinal virtues of the farmer in a stronger light. *AGRICOLA. Seneca County.*

Premium Farm.

The New-York State Agricultural Society awarded the first premium for the best cultivated farm (1848) to Mr. H. T. E. FOSTER, Lakeland Farm, Seneca county. We take from the *Transactions* of the Society, Mr. F.'s statement in regard to the management of his farm as follows:

SOIL AND SITUATION.—Lakeland farm lies on the eastern shore of Seneca Lake, and consists of 230 acres, of which 200 are under cultivation, the remaining 30 being woodland. Sloping gradually to the lake

shore, and undulatory in its character, the land has proved itself well adapted to the cultivation of both grain and the grasses.

The soil is a clayey loam, the subsoil being mostly a stiff clay, having a basis of slate rock, which in some parts of the farm, particularly near the lake shore, approximates the surface. Limestone boulders are occasionally found in different parts of the farm, but to no great extent.

The best method of improving the clay loam, of which my farm is composed, I have found to consist in deep plowing and ample manuring, care being taken to have those portions of the fields which needed it, thoroughly drained.

The usual depth of plowing is between six and seven inches, except when fall plowing is done; the furrow is then deepened, that a portion of the subsoil may be acted on by the frosts of winter. The soil being uniform in its character, it is out of my power to answer the remainder of the question relating to it.

I have made no particular experiments in reference to shallow and deep plowing.

The subsoil plow has not yet been introduced upon the farm.

The trees indigenous to the soil were red and white oak, hickory, hard and soft maple, black walnut, butternut, red elm, white and black ash, basswood, mulberry, wild cherry, crab apple, cucumber, aspen and thorn bush. The plants that were indigenous were, as far as I can ascertain, as follows: Ginseng, adder-tongue, Adam and Eve, blood root, blackberry, strawberry, elecampane, cowslip, crowfoot, colt's foot, heal-all, pilewort, Solomon's seal, wild turnep, wild gooseberry, mountain mint, wild pea, mandrakes, &c.

MANURES.—Twenty loads of manure, (30 bushels to the load,) are usually applied per acre. On some portions of the land where a stiff clay predominates, 30 loads per acre have proved advantageous. The manure is allowed to accumulate in the yards until spring, when it is either applied in a green state, or drawn out and made into a heap, alternating the manure with layers of straw, care being taken to have a trench made at the lower end of the heap, to receive the drainage therefrom; this trench being replenished from time to time, with fresh straw.

The manure is made from the straw of the different grains raised on the farm. With this straw the sheep and cattle yards are kept constantly littered to a good depth, and it is freely used as bedding in the horse and cow stables, the manure thrown from these being frequently covered with straw, to prevent the action of the sun, and retain as much as possible of the ammonia escaping therefrom. The number of loads manufactured annually depends in a great measure on the quantity of straw produced, and also varying with the number of cattle wintered. The whole number of loads drawn from the yards this past season was 400, this number would have been much greater, had not a deficiency of sheep hay rendered necessary the feeding of straw to the sheep for a longer period than has usually been the practice. Hitherto all the manure has been applied the same year it was made.

The manure is used partially in a green, and partially in a fermented state. The land intended for corn and potatoes is always covered with green manure, the surplus is applied in a fermented state to the fallows and stubbles in the fall.

There is a bed of shell marl on the farm lying at the depth of two feet from the surface, which having lately drained, I intend using in the manufacture of compost with my barn-yard manure. I know of no other way, by which my supply of manure could be cheaply increased.

I have used lime, plaster, bone dust and ashes. Six

bushels of lime were mixed with four of ashes and two of plaster, and applied at this rate per acre to the potato field. The vines grew with remarkable luxuriance. The yield of potatoes, however, was not great, and the tubers were much affected by the rot, contrary to my expectation, as this compost was applied in the hope of preventing the disease. Plaster is always applied in the spring as a top-dressing for clover and for corn, at the rate of a bushel per acre, always with very marked benefit. The pasture fields also receive a dressing at the same rate. Bone dust has been applied to timothy meadows, at the rate of three bushels per acre, without any visible effect.

TILLAGE CROPS.—One hundred and twenty-two and a-half acres were under tillage this year, as follows:

55 acres of wheat sown last fall; 13 do barley; 14 do oats; 13 do Indian corn; $\frac{1}{2}$ do potatoes; 27 do fallow, now sown with wheat.

I have, in addition, sown with wheat this fall, my oat and barley stubbles.

Two bushels of wheat are sown per acre in September. As but one field on the farm is infested with Canada thistles, or any other noxious weeds, which can be destroyed by fallowing, I have pursued the system of sowing my oat and barley stubbles, in preference to having as large a portion of my farm as is sown with wheat, lying in naked fallow. The crops raised by this method, have proved equal both in quality and quantity to those of my fallows; and as may be easily perceived, the profit is increased by the whole value of the summer crop. My method of stubbling is as follows: As soon as the oats and barley are removed, the land is plowed to a good depth, and immediately harrowed down. The stubble fields are allowed to remain in this state until the fallows are sown, thus giving an opportunity to whatever seeds or fallen grain may have remained on the ground to germinate. They are then cross-plowed, and the wheat sown and harrowed in. This year Ide's cultivator has been used in some of the fields to cover the seed, and from the appearance of the growing crop, successfully. It has been found that stubble fields prepared as has been stated, have been more free from pigeon weed, or red root, (with which most of the farms in this neighborhood are more or less infested,) than the fallows.

Part of my wheat was sown the past season on a clover ley, plowed to a good depth, the wheat sown on the furrow, and then harrowed in. The crop proved most excellent. It may be here remarked, that many farmers in this vicinity have practiced this method of sowing wheat on a clover ley, and with but few exceptions, successfully. The fields which are fallowed, are plowed three times, and thoroughly harrowed after each plowing. The usual time of sowing is from the 20th to the 30th of September. All the grain is cut before it is fully ripe. Hussey's reaping machine is employed in harvesting. Ten men are required to man this machine effectually, and twelve acres per day the usual amount cut, the machine being in operation about eight hours. By having two teams, and changing them every two hours, the number of acres cut, might, I have no doubt, be increased to sixteen per day. After remaining in shock till it is fully ripe, the wheat is carried to the barn where the threshing machine stands. The whole amount harvested from 55 acres, was 1,422 bushels, being at the rate of nearly 26 bushels per acre.

Barley is sown as early as possible in the spring, at the rate of two and a-half bushels per acre. The ground selected for this crop is usually that on which corn has grown the previous season. It is harvested in the same manner as the wheat. The average yield this season was 33 bushels per acre. The oats are usually sown on a clover sod, which has been used as sheep pasture the previous year. The average yield

per acre was 55 bushels. Both the oats and barley, as well as the wheat, exceeded the standard weight. It may be proper to state that the scythe and cradle were used in harvesting those portions of the oat and barley fields where the reaping machine could not be worked to advantage.

Indian corn is planted about the middle of May, in drills $3\frac{1}{2}$ feet apart, Emery's seed planter being used. It is cultivated and hoed twice during the season. Part of the land being ill adapted for corn, the average yield this season is light, being at the rate of 55 bushels of ears per acre.

For the last four years, the potatoes have been affected with what is termed the rot, frequently decaying, although apparently sound when dug, before a month has passed. No remedy has been discovered. Early and late planting and harvesting have both been tried, but without success.

GRASS LANDS.—Clover and timothy are grown on this farm. Twelve pounds of clover seed, mixed with four quarts of timothy, are sown per acre in the spring, either upon the growing wheat or harrowed in with the barley. Those fields intended for timothy meadows are sown in the fall, with from eight to ten quarts of good seed per acre. Both the timothy and clover seed are sown by hand.

Thirty-five acres were mown this year, the average yield being about a ton and a-half per acre. The manner of making clover hay is as follows: The clover that is cut one day is allowed to remain in the swath till the following morning, when it is turned, and the same afternoon raked with the horse rake, and put into small cocks; the next morning, if the weather is fine, these cocks are opened, and the hay is then carried to the sheds. From four to six quarts of salt are allowed to every load. The time of cutting varies of course with the season, but is generally about the first of July. Timothy hay is cut when the bloom is past, but before it is fully ripe. It is allowed to remain in the swath over night. The following day it is turned, raked into windrows and drawn in, without having been drawn into cocks. Salt is also freely used with this hay.

All the mowing lands can be plowed.

I have not practiced irrigation, as there is no means for so doing.

There is no bog or low land on the farm.

DOMESTIC ANIMALS.—The stock at present on the farm is as follows: seven cows, six young cattle, and four calves, six horses and a yearling colt. The cows and young cattle are a cross of the native breed with the Durham.

I have hitherto made no experiments to test the value of different broods.

The milch cows during the winter are housed in a building set apart for this purpose, each cow having her separate stall. They are allowed, however, the use of a yard adjoining the stable during part of each day. In this yard there is a trough which is always full of pure water. Morning and evening the cows are fed in the stalls, with corn-stalks and roots, as long as they last, while in the yard they are supplied with fresh straw, placed in racks. When the corn-stalks are all consumed, they are fed with hay. The young cattle are allowed to run in a barn yard, to which a warm shed for their shelter is attached, and are fed with corn stalks and straw till about the middle of February, when hay is substituted for the stalks. The corn stalks for the milch cows are usually cut with a cutting machine, moved by horse power. The young cattle have at all times access to water. The calves are kept in a yard by themselves, and in addition to hay, receive a feed of bran, or of corn and cob meal, daily. The cattle fed in this manner, keep in good condition and stand the winter well.

As most of the butter is consumed on the farm, no very accurate account has been kept of the quantity. There is nothing peculiar in the manner of making it. No cheese is made.

I have at the present time, 175 sheep. They are of the Merino breed, though not of pure blood. The average yield per fleece this season was $3\frac{1}{2}$ pounds. Last year's clip brought 30 cents a pound. The wool of this year's shearing is still unsold. About three-quarters of the ewes have lambs, and usually about four-fifths of these are raised. The sheep will now command from \$1.50 to \$1.75 per head. The lambs can be sold for \$1.

The sheep are wintered in large yards, with sufficient accommodations for shelter, and abundantly supplied with water. The ewes, wethers and lambs have each separate yards. The ewes and wethers are fed with straw, placed in suitable racks, with an occasional feed of bran, until about the first of February, when they receive in addition, a daily allowance of clover hay. The lambs are fed clover hay all through the winter, with a daily feed of oats or corn and cob meal. The past winter I lost but one sheep from the whole flock.

There are now on the farm 11 hogs, 2 breeding sows and 4 pigs, 15 in all. They are fed with fallen apples and the slop from the house until a month or six weeks before killing them, when they are fed as much corn as they will eat, in addition to the slop. They are killed when from 12 to 15 months old, and will average from 250 to 300 pounds when dressed. In the summer, the larger hogs are allowed to run in a clover lot.

No experiments have been made to test the value of different root crops. Turnips were once attempted, but without success. Half an acre of carrots are usually grown for the use of the milch cows, the land, however, being ill-adapted for roots, the yield is seldom large.

FRUIT.—There is an orchard of three and a-half acres, in full bearing, containing 120 trees; and I have lately planted another acre with 66 trees. The trees are all grafted, and comprise the following varieties: Early Harvest, Sweet Bough, Fall Pippin, Jersey Sweeting, Baldwin, Spitzenberg, Bellflower, Tallman Sweet, Vandevere, Pearmain, Seek-No-Further, Swaar, Rhode Island Greening, Spice, Winter Pippin, Lady Apple, Northern Spy, and Newtown Pippin.

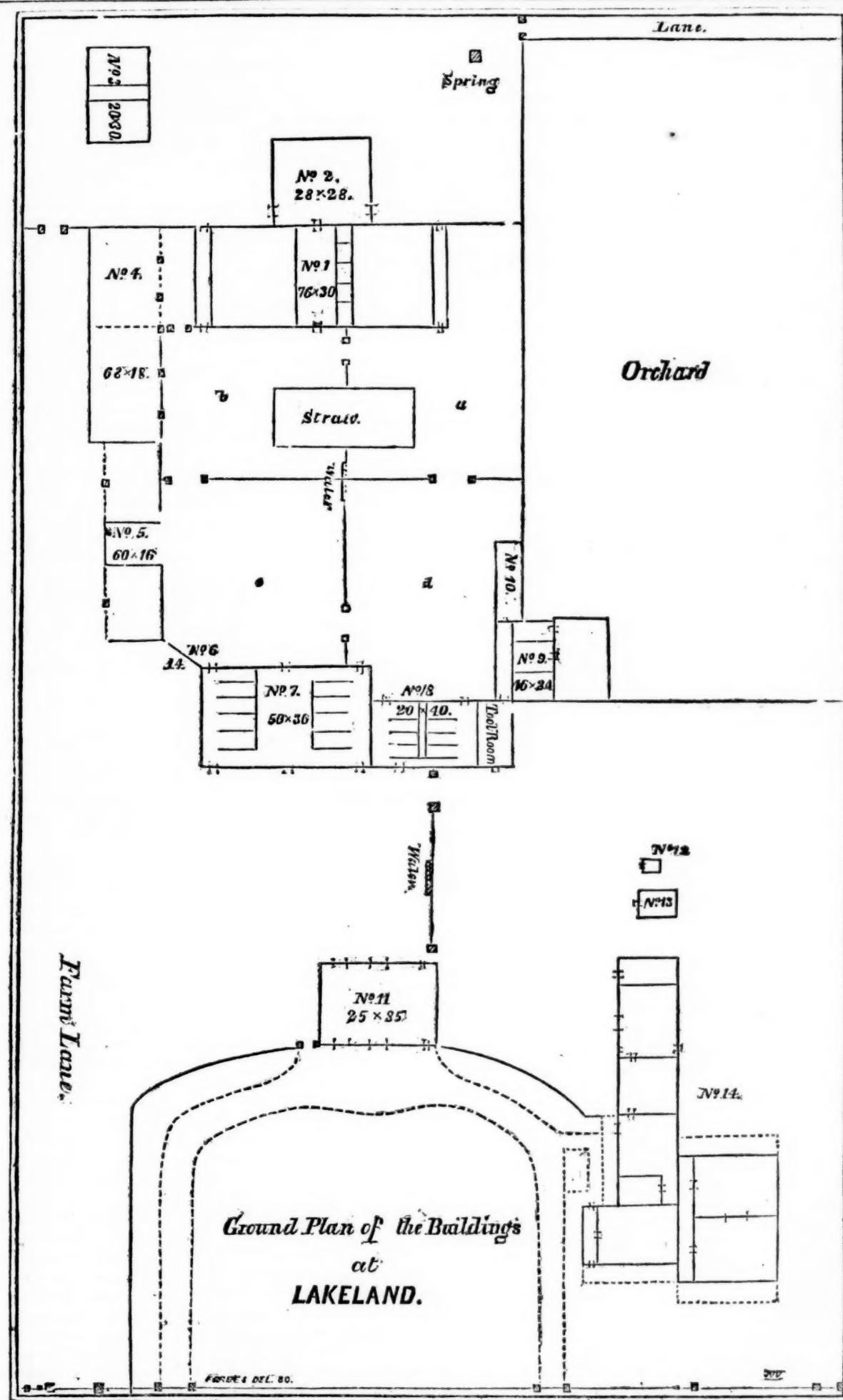
There is a pear orchard of two and a-half acres, lately planted, containing 178 trees of the following varieties: Madeleine, Bartlett, Bergamot, Virgalien, Seckel, Duchesse d'Angouleme, Louise Bonne de Jersey, Passe Colmar, Winter Nelis, Glout Moreau, Beurre d'Aremberg, &c. The cherry and peach trees are mostly young. The varieties are, of cherries: Napoleon Bigarreau, Elton, Elk-horn, Black Tartarian, Yellow Spanish, Morello, &c.; of peaches, Early York, Early Slocum, Tillotson, Rareripe. There are some fine plums in bearing, and a large number of young trees of approved varieties.

The apple-borer has injured the apple trees to some extent. To prevent its further depredations, I this year caused each tree to be surrounded with clay subsoil to the height of about eighteen inches above the ground, and have noticed but few trees that have been attacked since this was done.

The young orchards are kept always under cultivation, the ground being planted with either corn or potatoes, and well manured. The old orchard is plowed once in three years, receiving a good dressing of manure; one crop taken from it and then seeded down to clover.

No experiments have been made, worthy of note.

FENCES, BUILDINGS, &c.—The farm buildings are arranged in the form of a square, enclosing the barn-yard, which, with the exception of a small portion on the



southern side, is entirely surrounded. The barn-yard, for convenience, is divided into four parts; in the centre is a trough, which waters the farm-yards, and which is supplied from a never-failing spring, situated at a distance from the barn. The spring also furnishes an abundance of water for the house and garden. The situation of the respective buildings will be best understood by the annexed ground plan:

No. 1, is the grain-barn, 72 by 30 feet, with doors at each end, for driving in, but which can be filled with grain, when necessary, from the outside; a space of 16 feet is occupied as a granary, having bins on one side for the reception of different kinds of grain. The threshing machine and straw cutter stand on the floor above the granary, connected with the fanning-mill beneath, and both put in motion by the horse power, which occupies the ground floor of No. 2. The southern end of the barn is built on stone pillars, and is sufficiently high from the ground to afford an excellent shelter for a flock of sheep. No. 2. Building for the horse power; the upper part, which is open to the main barn, being used for grain. No. 3. A small grain-barn 30 feet by 20 feet. No. 4. A shed, the upper part of which is used for hay, and the lower part affording shelter to the cattle; opening to the barn-yard on the south. No. 5. Another shed; the upper part for hay, the lower part being subdivided into three parts, the central division opening on the barn-yard, and the others facing the lane, in which the farm wagons, sleighs, plows and other farm implements are housed. These divisions are of sufficient height to allow of the suspension of a hay-rigging above each wagon, and which can be lowered with facility when required for use. No. 6. Large double doors, connecting with the sheds and horse stable. No. 7. Horse stable, 50 feet by 30 feet, having stalls for ten horses, the space between the two rows of stalls being occupied as a feeding room, in which the hay and straw cutter stands. The upper part of the building is used for hay. The horse-stable is connected by a door with No. 8. The cow stables, with stalls for eight cows, each stall having a hay-rack, and a trough made of brick, for feeding roots, bran, &c. At one end of this same building is a room 12 ft. by 20 feet, which is used as a tool room, in which all the tools are placed at night. Under this room is a warm though well-ventilated cellar for roots. All the upper part of this building is used for hay. No. 9. Hog-pen, with yards attached, the upper floor being used as a hen-house: No. 10. Corn crib: No. 11. Carriage house: No. 12. Ash house: No. 13. Ice house: No. 14. Dwelling house. The wood house, wash room, and the sleeping apartments for the men, being situated in a building which extends back in the rear of the wing: *a.* Sheep yard; *b.* Yard for young cattle; *c.* Sheep yard; *d.* Cow yard; *e.* Sheep yard.

The fences on this farm are of three kinds: Post and board, post and rail, and the common worm fence. The post and board fence, of which there is 505 rods, is built of oak posts and pine and hemlock boards, four and a-half feet high, with a top board and a batten to each post, at an expense of one dollar per rod. Of post and rail fence, there is 276 rods. The posts and rails are both taken from the farm, and at a fair valuation for timber, the expense per panel is about 50 cents. The worm fence is made either in the ordinary manner, or with upright stakes joined at the top with wire. Of this kind of fence there is about 1300 rods. The rails cost from ten to fifteen dollars per thousand.

All the farming operations are conducted with accuracy. All the crops are measured and the results carefully recorded. A journal is kept of each day's work, in which the labor performed by every man is written; and in a book kept for the purpose, is noted the number of days' work bestowed on each field, with the expense

of labor, the product from the crop, and the profit from the same.

My books are kept in such a manner, that the expenses of the farm, and the income from it, can be seen at a glance, and an accurate balance of debt and credit can be made at any time. This system I consider not only necessary to an economical management of the farm, but highly satisfactory to the farmer, and will, in my opinion, amply repay him for the time and labor it requires.

The following statement of the expenses and profits of the wheat crop of this year, will serve as an illustration of the manner in which this branch of my accounts is kept.

<i>Preparing of ground.</i> —Men 77½ days, horses, (team) 77½ days.....	\$81 12
110 bushels seed wheat, at 9s.	123 75
<i>Harvesting.</i> —Men, 92 days,.....	\$62 87
Team, 12 days,.....	9 00
	71 87
<i>Threshing and cleaning.</i> —Men 62 days,.....	31 07
Team 19 days,.....	14 25
	45 32
Machine for threshing,	36 40
Board of men, 25½ days, at 25 cents,	62 87
Interest on value of land, 55 acres, at \$75 per acre, equal to \$4.125 at 7 per cent. is.....	288 75
<i>Cost of cultivation, including interest.</i>	\$710 08
1,420 bushels cost \$710 08, equal to 50c. per bushel. " " sold at \$1.10½.....	\$1,572 65
<i>Less, cost, as above,</i>	710 08
<i>Nett profit,</i>	\$862 57

N. B. The cost of cultivation, exclusive of interest on value of land, is equal to 29½ cents per bushel.

Similar statements could be given, of every crop raised, but the above will suffice.

I have thus answered to the best of my ability, all the questions proposed.

FARM ACCOUNT—1848.

<i>Dr.—To labor account,</i>	\$628 43
House expenses,.....	313 25
Farm expenses,.....	973 20
Amount paid for taxes,.....	32 07
Amount paid for insurance,.....	75 00
Profit and loss account,.....	1,037 35
	\$3,059 30
<i>Cr.—By 1,420 bushels wheat, at \$1.10½,</i>	\$1,572 65
410 bushels barley at 68 c.,.....	273 80
321 bushels corn, at 50 c.,.....	160 50
768 bushels oats, at 25 c.,.....	192 00
8½ bushels clover seed, at \$4,.....	34 00
6 bushels timothy seed, at \$2,.....	12 00
62 tons hay, at \$5,.....	310 00
15 tons corn stalks, at \$3,.....	45 00
24 bushels potatoes, at 25 c.,.....	6 00
75 bushels carrots, at 12½ c.,.....	9 37
30 bushels apples, at 63 c.,.....	18 90
11 hogs, average 230 lbs., at \$4,..	101 20
558 lbs. butter, at 12½ c.,.....	69 75
499½ lbs. of wool, at 26 c.,.....	129 97
Eggs,	15 00
Pelts sold,.....	8 25
Fire wood,	20 00
10 sheep sold,.....	23 00
6 pigs sold,.....	3 00
<i>Increase of stock</i>	
By 36 lambs, at \$1,.....	\$36 00
4 pigs, at 50 c.,.....	2 00
4 calves at \$3,.....	12 00
	50 00
	\$3,059 30

In the account of house and farm expenses are embraced the amount of farm produce consumed, and the actual cash expenditure. H. T. E. FOSTER.

PLOWING BY STEAM.—Some of the more recent experiments in England, in plowing by steam, have proved more successful than formerly, in consequence of using stationary engines at the extremities of the field. The engines are moved by a pair of horses. This mode would be well adapted for drained bogs, where the soil is often so soft, that teams cannot easily travel over it.

Obituary.

Death of E. Phinney, Esq.

EDITORS OF THE CULTIVATOR—I last week learned the sad fact of the sudden decease of our most estimable and respected friend, E. PHINNEY, Esq., of Lexington, Mass. In contemplating this unexpected event, I have the compound feeling of deep pensiveness at the great loss the community has sustained, and of exultation on account of the lustre, the bright beneficence, shining forth from his virtuous and industrious life. I think it right that we should pause a little, to consider the great and important influences, radiating from the life and character of our lamented friend, and the secret springs of those influences. Particularly is it right that his example should be held up to the view of every farmer in the land,—for he had not a superior, in all we understand by the terms—a hospitable, highly educated, and yet eminently practical and successful farmer.

Mr. PHINNEY was born in the year 1780, in Nova Scotia, whither his father had temporarily removed, from the then province of Maine. The family soon removed from thence to Lexington, Mass., upon the farm that our friend afterwards cultivated, till his death. The youthful days of our friend, until the age of seventeen years, were spent upon this farm. He assisted his father in the various labors of husbandry, during the season of seed-time and harvest, and his winters were devoted to the prosecution of his studies, preparatory to entering college. In walking over this farm, a year ago, with our deceased friend, he related, with a smile, many of the rude ancient modes of agriculture, which, while a lad, he assisted his father in performing. Among others, he mentioned, as we came to the now beautiful reclaimed meadow, yielding the most luxuriant crops of the cultivated grasses and grain, that he had toiled many a day with his father up to his knees in mud and water, in carrying off, upon poles, the swamp hay from this meadow, to dry ground.

In the year 1797, he entered Harvard University, at which he graduated, with distinction, in 1801, at the age of twenty-one. Entering immediately after upon the study of law, he came early to the practice of his profession, at Thomaston, in Maine. He afterwards returned to Massachusetts, and attained a high reputation in a long and laborious career at the bar, in the county of Middlesex. In the year 1831, he was appointed the Clerk of the Courts in that county. The duties of the office he discharged for eighteen years, or until the time of his death, with the most patient industry and faithfulness, to the entire acceptance of the court and the community. Indeed, he may truly be said do have met death with his harness buckled on; for he was carried directly from his office to his residence and the couch where he died. But it is my intention to speak more particularly of Mr. Phinney, as a farmer.

Mr. Phinney commenced farming some twenty-five years ago. His farm had been carried on previous to that time, under the rude and improvident methods generally current in those days. The uplands were covered with stones and bushes, and the fields that had been plowed and cropped, were most thoroughly exhausted. The lowlands were either unreclaimed sour meadow, or wild impassable morass. He was persuaded, however, that from the contiguity of the farm to a large market, and the natural freeness and quickness of the soil, an investment might here be made in the removal of obstructions to cultivation, and the improvement of the soil, which, in the end, would be richly remunerative. It was no part of Mr. Phinney's nature to do things 'by the halves,' and his plans for improvement were

upon a grand scale. All his prominent operations, however, were entered upon, and perfected with great judgment, and a strict regard to practical utility,—as results have proved. The total income of the farm not exceeding five hundred dollars per annum, for several years, reached nearly as many thousands before his death. His expenses, all the while, were very heavy, for his hospitality was unparalleled and unbounded. Hardly a week occurred, during the year, and at some seasons hardly a day in the week, but his family were entertaining visitors, attracted thither from all quarters of our country, to observe his modes of culture. It is believed that few men were as accomplished, in all that pertains to the gentleman and the hospitable host, as Mr. Phinney.

As a farmer, he brought to bear a most thorough investigation of the principles by which nature is governed in her operations. He never rested content with mere surface knowledge of scientific principles, nor with customs of husbandry, simply as such, but always was in the habit of looking into the interior merits of things. All his operations, in all stages, from the turning of the furrow, to the securing of harvests; from the breeding and rearing, to the full maturity of his agricultural animals, displayed the most thorough investigation of correct principles, by an enlightened and practical mind. I will but barely enumerate some of these operations, as the readers of *The Cultivator* have had an extended description of them in my former notices of his farming.

1. One of the first experiments made by Mr. Phinney, was the one by which he ascertained the amount of purely vegetable matter of the sward in an acre of grass land not yielding more than 500 lbs. of hay. The sward was carefully dug up on a portion of the field in the month of May, the roots and tops carefully separated from the dirt, and weighed; and it was found that an acre of sward land, of this description, contained twelve and a-quarter tons of vegetable matter. He therefore, commenced with, and always continued in, the practice of but one plowing for the whole rotation of crops following. By this means, the vegetable matter of the sod was turned under, there to remain, free from wasting influences by sun and wind, and, by its gradual decay, to keep the land light and permeable, and furnish nourishment to all the crops of that rotation.

2. The extensive manufacture, and correct application of peat and other composts.

3. The thorough under-draining of his bog-meadows and springy soils, thus bringing into profitable cultivation, land before without value.

4. The planting of extensive orchards, of valuable fruits, the rearing and training of the trees, showing the benefits of keeping the soil constantly open by cultivation, and of spreading out the tops or branches by the horizontal method of training, so as to admit the genial influences of light and heat in the perfecting and ripening of the fruit.

5. The scientific crossing, and the care and feeding, of improved breeds of cattle and swine.

However pressing professional duties might be, Mr. Phinney always found time to direct the various and daily business of the farm. To accomplish so much, it was his custom, during the fall and winter months, when his official duties were the most pressing, to rise by four o'clock in the morning, shave himself by the light of his fire, and then draw on a pair of stout boots, and with lantern in hand, sally forth to the barns and piggeries, to inquire into the condition of his numerous animals, and give the workmen the necessary directions for the business of the day. At six o'clock he took his breakfast, and immediately after started for the Court house, eleven miles distant, returning home

at night. It was not unusual for him to repeat his visit to the barns in the evening. His friends sometimes remonstrated with him for returning home in very inclement weather; but he always replied, that this kind of exposure and activity fitted him the better for the discharge of official duties, and would never hurt him.

Mr. Phinney was constantly receiving letters from all quarters, making inquiries upon various subjects pertaining to farming, the answers to which would sometimes extend through several sheets of paper. Yet, owing to his love for, and his desire to promote agriculture, together with his perfect system, and untiring industry, he would always take pleasure in finding time, by some means or another, (often by sitting up till past midnight,) to answer those inquiries. It is a matter of regret to his friends now, however, that more of his spare or *stolen* time, could not have been devoted to a more public communication of his vast stores of knowledge, through the agricultural Journals, thereby benefiting a far greater number.

As a practical writer upon farming, no man in our country held a higher rank than Mr. Phinney. His communications to the *New England Farmer*, and other papers, upon the various modes of culture he had adopted, detail every important particular with the greatest precision and minuteness, and evince the soundest discrimination, the profoundest investigation of correct principle. I here give a few extracts from his published writings, to show his ability in this way. The first quotation indicates the ardor of his mind in his agricultural pursuits:—

"The first sod that was turned, was one of the first decided steps from a savage to a civilized life, and in proportion to his advancement in agriculture and the arts of husbandry, man has, in all ages, receded from barbarism. Compare, for a moment, the miserable condition of the houseless, roaming savage of the forest, clad in the skins of beasts, furious and ungoverned as himself, depending for his subsistence upon the uncertain fruits of the chase, or the spontaneous productions of the earth, with the substantial permanent comforts of the industrious, intelligent and virtuous farmer;—and will not the contrast reconcile the cultivator of the soil, to a cheerful obedience of the divine command, to 'eat his bread in the sweat of his brow?'

"I shall not attempt a labored account of the progress of agriculture, from the earliest ages to the present day. It is enough that we find the opulent, the powerful and the learned of modern, as well as ancient days, devoting their wealth, their influence and their talents, to the advancement of the interests of agriculture. Who, then, is so regardless of the utility, the honor, or the pleasure of cultivating the soil, as not to aspire to the honorable appellation of Farmer? Who does not wish to withdraw from the anxious cares and uncertain pleasures of merchandize, and the perplexing duties of public or professional life, to repose on the tranquil bosom of rural retirement, and taste the pleasures, as well as partake in the labors of rustic life?"

The following extract shows the difficulties to be encountered, and the obstacles to be overcome in cultivating the stern soils of Middlesex county, among the hardest of which was his own farm, in its natural state:

"The deep intervals and alluvial tracts, which abound in some parts of our country, where almost the whole labor of husbandry consists in sowing and reaping, and no farther skill of the farmer is required than to know seed time and harvest, are not to be found in Middlesex. The broken and rugged surface of our farms, made up of hills and valleys of the roughest materials, requires great labor as well as skill to subdue its stubborn qualities, to preserve its natural strength, or to restore its

wasted energies. This, while it increases the labor of the husbandman, at the same time gives him health of body and vigor for action, while he is happily exempted from the many evils which attend the cultivator of a more fertile region. This very rough and comparatively barren quality of our soil, though it may sometimes yield but a stinted harvest, and oblige the farmer to rise early, go late to rest, and eat the bread of carefulness, has nevertheless proved an independent, virtuous and happy community of farmers, whose unyielding patriotism and noble deeds of daring have enrolled the yeomanry of Middlesex among the boldest defenders of Grecian or Roman liberties."

Mr. Phinney was among that better class of farmers,—happily, a rapidly increasing class,—who disdain not to draw information touching their profession from books. All his practices were the result of a careful investigation of theoretical principles, derived from extensive agricultural reading, united with the closest and most minute personal observation in the field. One blow of his vigorous pen, demolishes the whole tribe of clamorers against 'Book-farming.' Hear him:—

"Books, I am aware, are a most distrustful source of information among many of my agricultural brethren. This ought not so to be. While the professors and friends of all the other arts and sciences, call to their aid the light and accumulated *written* wisdom of the past and present ages, why should the art of cultivating the earth, by far the most important of all the arts, be allowed no other guide than blind tradition?"

Every attentive observer of the actual condition and prospects of farmers around him, sees, that those tillers of the soil who read, observe and think, who make the laws of nature their study, and who appropriate to their own advantage every valuable suggestion of science, are fast distancing their more drudging neighbors, who are bound by the grappling, *withering* power of ignorance and prejudice. Mr. Phinney's remarks are much to the point on this subject:—

"It is true, that the wealth of the opulent has done much, but mental research and a spirit of inquiry, accompanied by the personal inspection and persevering efforts of the practical farmer have done much more, to increase the produce, and improve the condition of our farms. This is most forcibly illustrated by Pliny the elder:—

"Furius Cresinus, an emancipated Roman slave, having obtained from his very small estate, much larger crops than his more wealthy neighbors from their vast domains, they became so envious that they charged him with employing enchantment to attract into his grounds the produce of their fields. Having been summoned by Spurius Albinus, and being fearful of condemnation, he introduced into the forum, as the tribes prepared to vote, his robust and well clad family, and his agricultural implements, his heavy mattocks, his ingeniously constructed plows, and his well fed oxen, and then exclaimed—Behold! Roman Citizens, my magic; but I am still unable to show you, or bring into the market place, my *studies*, my constant *vigilance*, my fatiguing labors. Scarcely had he concluded, when he was absolved by public acclamation."

"It is in enterprise, *study*, *unremitting study*, vigilance and industry, that the mystery of great crops and successful husbandry consists."

It is the glory of our country that we have, scattered along everywhere among its private citizens, individuals,—unknown, perhaps, beyond the limited sphere of a district,—who are competent, both by native endowments and personal attainments, to fill the great and responsible trusts of State. All that shall be wanting is some fitting circumstance to draw the individuals out, and familiarize them with the *details* pertaining to those trusts. We may specify a little. It is the glory

of our country, and it will tell, too, upon its future prosperity, that we now have individuals scattered along in the agricultural profession, who fully answer this description.

Among these, we may regard our lamented friend, Mr. Phinney, as an eminent example. Fitted for the highest walks of civilized life, he yet found ample scope for the successful employment of his talents and acquirements, in the peaceful and noiseless pursuits of agriculture. And so it ought to be. It is of the first importance to successful farming on the part of the individual, and, hence, to a prosperous agriculture, with its long train of attendant blessings, on the part of the State, that our farmers, generally, should be men of thought and observation,—men of mental culture. The farmer has to do with the great and mysterious operations and principles of nature; all his various steps or processes of cultivation, are closely connected with those principles, and his success, in a high sense, is absolutely dependant upon a knowledge and close observation of them. He finds, that in the cultivation of the earth, there are undiscovered principles enough, to engage the utmost efforts of Science to develope, mysteries enough, to task the most highly cultivated, the most specially endowed mind to unravel.

"The scenes of nature lie open to our view; they solicit our senses, and are adapted to impress themselves in a most lively manner upon our minds. Still, the mysteries of nature, with regard to the essences of things, and indeed to a multitude of subtle operations, are kept in a kind of sacred reserve, and elude the utmost efforts of philosophy to *surprise them in their concealments* and bring them to light. While Science goes on from step to step, in the march of her discoveries, it seems as if her grandest result was the conviction how much remains undiscovered; and while nations in a ruder state of science have been ready to repose on their ignorance and error, or to confound familiarity with knowledge, the most enlightened of men have always been the first to perceive and acknowledge the remaining obscurity which hung around them; just as, in the night, the further a light extends, the wider the surrounding sphere of darkness appears. Those that have devoted themselves to an investigation of the laws of nature, find, in a great variety of the most common productions, sufficient to engage their inquiries and employ their faculties: they perceive that the meanest work of God is inexhaustible;—contains secrets which the wisdom of man has not been able to penetrate. They are only some of the superficial appearances and sensible properties with which we are familiar. Substances and essences we cannot reach. The secret laws which regulate the operations of nature, we cannot unveil. Thus, one of the best effects of intellectual cultivation, and the acquisition of knowledge, is to restore the mind to that state of natural simplicity and surprise in which everything above, beneath, and around us, appears replete with mystery, and excites those emotions of freshness and astonishment, with which the scenes of nature are contemplated during the season of childhood."*

In the year 1837, Mr. Phinney was chosen one of the Trustees of the 'Massachusetts Society for Promoting Agriculture.' This office he held till the time of his death. The various masterly reports of this Society, during this time, were from Mr. Phinney's pen; and it is but fair to presume that the suggestions put forth by him in this capacity, have had much to do in moulding and perfecting the improved modes of culture, now so common in the State. Among other things, it may be stated that the present improved form and light draught of the subsoil plow, as compared with the heavy,

cumbrous implements of the kind that were first introduced among us from Europe, may be attributed to the investigations and suggestions of Mr. Phinney. His mind was *always* open to improvements. Although, as before stated, his large and important operations were entered upon and conducted with a strict regard to practical utility and profit, yet, so great was his love for Science, in its application to Agriculture, that he would try, upon a small scale, any experiment, suggested from a respectable source, which seemed to lean towards the development of important principles.

But our friend has set sail upon that vast ocean to the shore of which we, too, are so rapidly tending. His long life, so closely compacted with usefulness to the community, was closed, by a short and severe inflammatory illness, at his residence in Lexington, on the 24th of July last. He had attained his seventieth year, without ever before experiencing any severe sickness. The amiable and interesting family have met with a loss that can never be repaired; but while sorrowing over their bereavement, may a reflection upon his kind and fatherly deportment while among them, the high and noble deeds of his life, and the important influences which they are calculated to impart to Society, cheer them in *their* path of life, and, like him, may they fulfil the course allotted to them by like deeds of beneficence.

The public generally, and the agricultural community particularly, have also experienced a great loss, in the death of one so distinguished for the busy occupation of both pen and hand, in every way that could promote the interests of society. Though dead, yet does our friend, by his illustrious example, emphatically remind us to be up and doing, "while it is called to-day;" to seek the enlightenment and elevation of our fellows, in distinction from a total engrossment in *merely* selfish and paltry pursuits.

"So live, that when thy summons comes to join
The innumerable caravan, that moves
To that mysterious realm, where each shall take
His chamber in the silent halls of death,
Thou go not, like the quarry-slave at night,
Scourged to his dungeon, but sustained and soothed
By an unfaltering trust, approach thy grave,
Like one who wraps the drapery of his couch
About him, and lies down to pleasant dreams."

Brattleboro', Vt., August 15, 1849. F. HOLBROOK.

The Veterinary Department.

Inflammatory Fever.

EDS. CULTIVATOR—My attention having been attracted by several communications in your useful journal, on the diseases of animals, I am induced to offer a few remarks on one of the most fatal diseases of cattle, which may be properly called "sanguineous congestion," or "inflammatory fever."

The primary source of this disease, in my opinion, lies in the too sudden changes from scarcity to rich pastures. Plants vegetating in a warm dry atmosphere, and those growing on elevated lands, contain much nutritive matter; on the contrary, when plants grow luxuriantly or in wet situations, they are not very nutritious. No one can doubt that nutritious food makes rich blood, and if cattle are allowed to eat, *ad libitum*, grasses of good quality, can we wonder that an abundance of blood should be formed which pre-disposes the animal to sanguineous congestion. Other causes may unite themselves with this excess of food, as want of exercise, great dryness of the air with excessive heat. These, by taking away the serous (watery) parts of the

blood by the skin and lungs, are all causes which have a tendency to induce congestion.

It is an error to suppose that the fat animal alone can die of plethora; for there is equal if not greater danger with regard to all cattle which make blood rapidly, if the food is nutritious or too rapidly changed when they are in common store condition, than when they are oppressed with fatness. This disease seldom appears in "house-fed" or lean stock; but those feeding or growing most rapidly are its first victims.

In this disease, congestion may be general or partial; if general, it will be principally confined to the brain, the lungs, or the bowels. The animal in such cases all at once ceases to eat; pauses; appears as if stunned; poises itself upon its tottering legs; the flanks heave rapidly; the eyes are no longer sensible to light; the nose is protruded; it foams at the mouth; frequently totters, stumbles and falls; lastly, a gurgling noise is heard in its throat, and it dies in dreadful convulsions. But when congestion is partial, the disease is less rapid in its course; the animal is dull, depressed, ceases to ruminate; limps first with one leg, then with another; large tumors appear in various parts of the body, which rapidly extend by infiltration over the body; the constituents of the blood separate, and decomposition soon begins in the affected tissues. In some cases the animal dies in less than an hour; others survive several hours, and in a few cases, two or three days pass before the disease arrives at a crisis. In most of these latter cases, the animal recovers.

The treatment of these diseases, in order to be successful, must be conducted with strict reference not only to the stage, but the complications of each case must receive our best attentions. The propriety of having recourse to blood-letting, will be best indicated by the character and number of the pulse. If its tone is weak, accompanied with great depression and rapid loss of strength, the ears and legs being cold, bleeding will not only be useless, but highly destructive; the animal is in a state of collapse, and the most active stimulants, as the carbonate of ammonia, spirits of nitric or sulphuric ether, spirits of turpentine, ginger, &c., with warm clothing and frictions to the cold parts of the body.

Bleeding should only be adopted either as a preventive, or at the very commencement of general congestion. It may then be followed by full doses of epsom salts with ginger. I would advise all breeders, on their losing one animal by this malady, to carefully examine their stock, and on observing any symptom of indisposition, to lose no time, but meet it by bleeding, physic, and short feed. ARTH. S. COPEMAN. Utica, N. Y. July, 1849.

Docking Lambs.

EDS. CULTIVATOR—Under the head of the Veterinary Department, the June number of The Cultivator, I find an article by O. F. M., of Wheeler, Steuben county. He gives his method of docking lambs. He says he takes the tail in his left hand, and holds it out straight, and, with a good shoe knife, cuts it off "as close as suits fancy." He says he finds this method quicker and better than a chisel and block. From my own experience, I think this is the very worst plan that could be adopted. It not only takes much longer to heal, but must be much more painful. Any person who has had any experience in this matter, knows that by pulling the tail hard enough to hold it out straight, and cutting it off with a knife in the manner he describes, will stretch the skin on the tail so much that when it is cut off, it will draw back and leave part of the bone bare; which will make a bad sore, exposed in such a manner that it will cause the little innocent much

unnecessary suffering. Whereas by placing the tail on a block and drawing the skin close up on the tail, and with a mallet and chisel it is struck off at a blow. Then the skin shoves over the end of the bone, which not only protects the bone but is much sooner healed. A FRIEND OF HUMANITY. Sullivan Co., N. Y., June 18th, 1849.

The Horticultural Department.

CONDUCTED BY J. J. THOMAS.

Trees in Cities.

In closely built towns and cities, nothing is more repulsive to the eye, than long ranges of bare blocks occupied as dwellings, standing directly on the street, with none of the glare of reflection softened by the foliage of trees. Many of the better streets in some of our cities have, however, been exceedingly improved in this particular, by a narrow enclosed strip a few feet wide, protected by iron railing in front. A still greater improvement, but rarely adopted, is to build a row of dwellings at a greater distance from the boundary of the street, so as to leave a strip of lawn from twelve to thirty feet in width, to be planted with trees, and kept in the best manner. The accompanying figure represents a row of six houses thus situated. By this arrangement, all of them enjoy separately to a considera-



69—TREES IN CITIES.

ble degree, the view of the whole piece of ground; and whatever diminution in the space of the rear may become necessary, would thus be more than compensated by the improvement of the front. As a matter of pecuniary profit, the yearly value of such dwellings would doubtless be much greater in consequence of the slight increased expense of preparing and planting the grounds.

Raspberries.

The Red Antwerp, and its kindred varieties, the Franconia and Fastolff, do not always succeed on light soils. Indeed it often happens, when the season is very dry, that they do not attain one-third their full size, and inexperienced cultivators are much disappointed, after having heard high recommendations of these celebrated sorts. The difficulty with light soils may be removed in a large degree by deepening the soil, and by a copious application of manure. Such soils should be dug not less than two feet deep, and even a greater depth would be better. Treated in this way, a strong loamy soil will give uniformly fine crops. But where the soil is a quite dry gravel, it may be difficult even, by trenching, to adapt it to the successful growth of the Red Antwerp. The substitution of the American Black Raspberry will be found in such instances a decided advantage. During the late severely dry weather, the latter variety on dry gravel, was observed to be very slightly affected, while some other sorts were rendered wholly unproductive. Although not of large size, the Black Raspberry possesses an unusually high flavor, and a decided improvement is made by enriching cultivation.

Spurious sorts are sometimes introduced in mixture with those which are genuine, by the dropping of the seed, and the production of new varieties on the same ground—which is to be prevented by picking the fruit

clean, or by a careful removal of the new seedlings before they have attained much size.

Strawberries for Market.

The following interesting statement of the actual productiveness of some celebrated sorts of strawberry, we copy from the *Genesee Farmer*. This information is the more valuable, as giving the result of a large experiment in a region where the strawberry culture has not as yet been very extensively adopted, and with all the accuracy of real measurement:

"Messrs. BISSELL, HOOKER & SLOANE have also supplied the market largely. In a little over 2 weeks they have sold about two hundred bushels of fruit, notwithstanding the cautions of the 'Board of Health.' Their varieties for marketing were *Hovey's Seedling*, *Crimson Cone*, and *Large Early Scarlet*—the latter being their standard sort, according to their experience, by far the most profitable. From a bed measuring 119 rods of ground, they have picked upwards of 109 bushels of this fruit."

NEW SEEDLINGS.—The same paper contains descriptions of 22 new varieties of the strawberry, raised by ELWANGER & BARRY, of Rochester, and selected from about one thousand new seedlings, mostly crosses between Hovey's Seedling and Large Early Scarlet. These descriptions are given in a report of the Fruit Committee of the Genesee Valley Horticultural Society. Having had an opportunity of examining these new seedlings when in full bearing, the writer can add his testimony to their fine quality and extraordinary productiveness. They have now borne two years. New varieties, it is true, are to be received with great caution, but we cannot but believe that some of these may, at least for this latitude, prove eminently valuable. We copy the following descriptions from the report of the committee:—

5. Pistillate, a very large fruit, color a light scarlet, with dark seeds, shape mostly round, very juicy, immense bearer, (108 berries were counted on one root) a first rate berry, thought by some of the committee, the best of the lot.

6. Pistillate, regular round shaped, much like the last, thought as good a bearer, and as juicy, but not quite so fine flavored.

9. Pistillate, a great bearer, juicy and high-flavored, a deep, bright, glossy scarlet, an excellent table fruit.

11. Pistillate, medium size, very dark scarlet, very juicy, high and somewhat musky flavor, good table fruit, medium bearer.

14. Pistillate, a great bearer, short-necked, high-flavored, very juicy, size above medium, thought the best of all the varieties.

16. Pistillate, flavor much like No. 14.

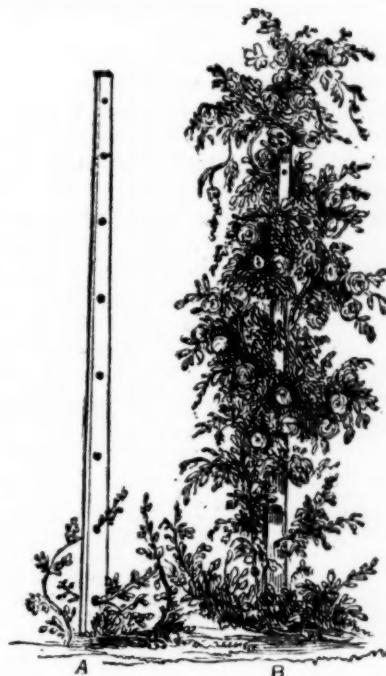
22. Color a beautiful orange scarlet, an excellent table fruit, being tart, very large, and a very good bearer, and valuable for its lateness.

To the report of the committee, P. BARRY, Hort. Editor of the *Farmer*, appends the following remarks:

From the above collection, Messrs. ELWANGER & BARRY have selected five sorts, which they consider eminently worthy of cultivation, combining large size, fair quality, with extraordinary productiveness.

They have borne for two years, beside the best known varieties, and under the same conditions, and have, so far, surpassed them all in productiveness. They cannot say how they may succeed in other localities, but here Messrs. E. & B. feel confident they will prove valuable.

The following are the names of varieties chosen:—No. 6, Monroe Scarlet; 11, New Necked Pine; 16, Climax Scarlet, 22, Orange Prolific.



Rose Pillars.

We published a few months since, the description of a mode of supporting climbing plants, on the trunk of a cedar tree, armed with short side branches from bottom to top. We give, in the above figure, another mode of effecting the same object in a more simple manner, which may be advantageously adopted where the cedar supports cannot be obtained, and which, if of durable wood, will last a long time. It is not, however, suited to the more delicate climbers, as these would hardly assume a sufficient breadth of growth; but for roses, bignonias, and the more rampant growers, it is admirably adapted.

It is made of a piece of scantling, set upright like a post, in the earth, and pierced with holes at a distance of about a foot from each other. Through these holes the growing shoots are inserted as they advance upwards in growth, running them in opposite directions through the same hole, and at the same time occasionally twining them around the post, so as to conceal its surface. This mode of support has for some years been adopted by David Thomas, of Aurora, Cayuga county, and from a specimen upon his grounds, the above figure was drawn. The double Prairie, or Michigan roses, the Boursaults, and the taller growing hybrid China roses, are well adapted to these sorts of pillars, and the intermingling of the various shades of color, produces a very pleasing appearance.

The Seckel Pear.

This variety of the pear possesses more than ordinary interest for several reasons. Usually, it is remarkable for withstanding the blight. It is the highest flavored pear known. And so uniform is its excellence in all localities, that the fruit committee of the American Congress of Fruit Growers, *unanimously* pronounced it worthy of general cultivation, a compliment which no other of the thousand pears, except the Bartlett, received. It holds about the same rank with pears, as the Green Gage with plums.

The original tree still stands on the banks of the Delaware, three and a-half miles below Philadelphia. According to Dr. Brincké, it is about thirty feet high, two feet in diameter within a foot of the ground, and sixteen inches, higher up. It stands in a pasture without protection, and the trunk is hollow and decayed on one side.

Selection of Good Fruits.

We extract the following interesting remarks on fruit culture and selection of varieties, by that experienced New-England cultivator, SAMUEL WALKER, Esq., of Roxbury, now President of the Massachusetts Horticultural Society, from the Report of the American Institute.—*Horticultrist.*

In submitting the following list of the best American varieties of apples, pears, and plums in juxtaposition with the best European varieties, it is not my intention to make any invidious comparison; on trial,—the truth, the whole truth, will be amply sufficient for any purpose. I shall, therefore, leave the result in the hands of the best judges—the cultivators—simply stating that I shall select the best varieties from the catalogues of the New and the Old World.

APPLES.*American Varieties.*

1. Early Harvest,
2. Williams' Apple,
3. Benoni,
4. Porter,
5. Pomme de Neige,
6. Baldwin,
7. Yellow Belle Fleur,
8. Newtown Pippin, (green)
9. Rhode Island Greening,
10. American Golden Russet.

European Varieties.

1. Early Red Margaret,
2. Red Astrachan,
3. Sops of Wine,
4. Gravenstein,
5. Ross Nonpareil,
6. Dutch Mignonne
7. Cornish Gilliflower,
8. Ribston Pippin,
9. Herefordshire Pearmain,
10. English Golden Russet.

I will not carry out the comparisons further, but submit a list of American varieties, all of which are deserving of extensive cultivation, viz:

Large Yellow Bough, Chandler, Fall Harvey, Jonathan, Minister, Hubbardston Nonsuch, Rambo, River, St. Lawrence, (Corse's,) Northern Spy, Esopus Spitzenburgh, Summer Queen, and Ladies' Sweeting.

PEARS.*American Varieties.*

1. Bloodgood,
2. Dearborn's Seedling,
3. Pratt,
4. Knight's Seedling,
5. Tyson,
6. Seckel,
7. Cushing,
8. Heathcot,
9. Andrews,
10. Buffum,
11. Dix,
12. Lawrence,
13. Columbia.

European Varieties.

1. Citron des Carmes,
2. Passans du Portugal,
3. Williams' Bonchretien,
4. Flemish Beauty,
5. Rostiezzer,
6. Fondante d'Automne,
7. Bezi de la Motte,
8. Doyenne Blanc,
9. Louise Bonne de Jersey,
10. Doyenne Gris,
11. Beurre Diel,
12. Duchesse d'Angouleme,
13. Glout Moreau.

In addition to the above, I will add a list of European varieties of great merit, viz:

Beurre d'Aremberg, Beurre d'Anjou, Beurre Bosc, Eyewood, Henry IV, Van Mons Leon Le Clerc, Marie Louise, Winter Nelis, Paradise d'Automne, Passe Colmar, St. Ghislain, Vicar of Winkfield, Urbaniste, and Echasserie. For baking, Belmont, Black Worcester, Catillac, and Uvedale's St. Germain.

PLUMS.*American Varieties.*

1. Jefferson,
2. Columbin,
3. Washington.

European Varieties.

1. Green Gage,
2. Purple Gage,
3. Coe's Golden Drop.

To this lot of plums, I will add the following American varieties as worthy of a place in every good collection, viz:

Purple Favorite, Huling's Superb, Imperial Gage, Lawrence Favorite, Bleecker's Gage, and Bingham.

CHERRIES.—The best varieties of American and European cherries are very dissimilar. I shall therefore submit a list of such varieties as I consider of the best quality, viz:

American varieties.—Sparhawk's Honey, Downer's Late, Sweet Montmorency, Manning's Mottled, Downing's Red Cheek.

European varieties.—Black Eagle, Black Heart, Black Tartarian, Downton, Knight's Early Black, Bigarreau, Bigarreau Holland, Elton, Florence, Belle de Choisy, May Duke, and the Late Duke.

By the foregoing statement it will be perceived that among the well established apples and plums in this country, a majority are the product of America. Of pears and cherries, the greater number have been imported from Europe.

I will now proceed to the second part of my subject, and notwithstanding my esteemed friend, Thomas Bridgman, Esq., has with ability and good judgment, brought the subject of seedlings under the notice of the managers, yet I shall not refrain to state all I intended to do before I received Mr. Bridgman's able report.

I am aware when a word of caution is to be spoken, or an error pointed out, that it should be done with candor and kindness; in that spirit the following remarks are submitted:

SEEDLING FRUITS.—My object is to point out an error, may I not rather say, a weakness, on the part of some cultivators of fruits, to overrate their own productive, more especially so when they raise a seedling apple, pear, plum, peach or cherry, having any pretension to merit. If their production is of the best quality, and possesses but a single point of superiority, say only a shade of color, or a slight increase of size, in addition to the good qualities of the most choice variety of that class of fruit in the present catalogues, that alone will commend it to other persons, and they will mete out its praise in due season.

No seedling should be recommended for extensive cultivation until it shall have been proved to be *superior in some respects* to the variety it most resembles. For instance, if any person shall raise a seedling plum one-fourth larger, and equal or superior in flavor, more beautiful in its appearance, and more productive than the Green Gage, then the new variety would soon find its way into every good collection of plums. The same remarks will apply to the Newtown Pippin apple. The person who shall be so fortunate as to raise a seedling apple of equal flavor, better color, and a tree more thrifty and productive than the green Newtown Pippin, will have accomplished something *worthy of record and a name*. But cultivators, like young fond mothers, are apt to consider their production to be a "non-such," time, alas! often convinces them of their mistake; and when too late, they find they have only deceived themselves.

Raising Fruit in Russia.

In the intensely cold climate of St. Petersburg, where nearly all our common fruit trees perish under ordinary circumstances, fine crops of apples, plums, and cherries have been obtained, by training the branches on a trellis only about a foot from the ground. The heavy snows entirely cover them, and completely protect them. Large crops of apples have thus been obtained for successive years, even after winters which have destroyed other trees when double matted. The Green Gage and Orleans plum have ripened before mid-autumn. Morello cherries have borne good crops. Whether the fruit ripens, it does not bruise in falling.

Mulching.

This excellent mode of treating newly transplanted trees, has been found eminently beneficial during the present very dry summer. A row of young apple trees had been set on a piece of ground, where cultivation could not easily be given. In the early part of summer, they entirely ceased growing, and on a large portion the foliage began to assume a yellow appearance, and their loss was strongly apprehended. Coarse litter was then applied to them, to a depth of several inches and extending some feet about them. So beneficial has been the result, in retaining the moisture of the soil, that although several weeks have elapsed since with

scarcely a single shower during this whole period, that they nearly all have commenced re-growing, and the leaves have regained the usual green color.

Planting Strawberries.

As a general rule, the spring of the year has been found much the best season for planting out beds of the strawberry. But it often becomes necessary to perform the operation during summer, or early in autumn. If, at this season, the weather should prove quite dry, a regular and abundant watering for several days does not always prevent the loss of a considerable portion of the plants. To obviate this difficulty, the writer has adopted the following very simple treatment, which has been quite successful even at midsummer, and in the midst of the recent extraordinary drouth. Nearly all the leaves are pinched off from the plants, except the central and half developed ones; the roots are dipped in a vessel of soft mud, giving them a thick coating; when set out, the earth is well settled about them by means of a copious watering; and then about two inches of rotted manure spread upon the surface. This will keep the soil sufficiently moist with one daily watering, if the weather be very dry, and much less frequently if it be moist.

Rawle's Jannett.

Having noticed a great many communications recently, about the Rawle's Jannett apple, I will mention a fact that may be of benefit to the growers of that superior fruit. A friend who has a large orchard of this apple, has ten trees upon one corner of the orchard which always produce fruit a third larger, and the flavor so much superior, that it was supposed by all who saw and ate the apple, that they were a superior variety of the Jannett. This spring I examined the soil, and found that a vein of iron ore passed just under the ten trees, so near the surface that it had been plowed and worked up with the top soil. A variety of the large Blue plum growing upon the same ground, is also very fine; while grafts taken from the same plum trees and worked upon stocks grown on different soil, proves worthless. H. R. ROBEY. Hopewell Nurseries, near Fredericksburg, Va.

Aphides and Ants.

EDS. CULTIVATOR—Having transplanted during the past winter, an orchard of the most select varieties of fruit trees, I discover that at the present time they are infested by thousands of small red and black ants. Already they have completely destroyed an ornamental yard tree, (the *Magnolia glauca*,) whether by their own depredations, or that of the aphides conveyed thither by them, I am at a loss to determine. Fearing that the same effect will be produced on the trees above noticed, and having tried all the remedies mentioned in various vols. of *The Cultivator*, as well as those obtained from acquaintances, without success; such as the application of lime and ashes to the roots, soot to the leaves, and tar around the trunks, I would respectfully request that you, or any of your numerous contributors who may be in possession of a remedy for this evil, will make it public.

I find that while the apple, pear and plum are comparatively free from ants, the cherry, apricot, nectarine and peach, (particularly the last) are peculiarly liable to their attacks. THOMAS C. HINES. Nansemond, Va., June 24, 1849.

We are not aware that fruit trees are injured by ants, neither have we known ants to convey aphides to trees. The sweet substance called "honey-dew," exuded by aphides, is eaten by ants; and to obtain this, they frequent those parts of plants where the aphides are lod-

ged. To destroy aphides, syringe the trees or plants with tobacco-water, or strong soap-suds.—EDS.

Horticultural Items.

STRAWBERRY CULTURE.—The *Farmer & Mechanic* gives the result of the experiments of C. H. Starr, of Groton, Ct., on half an acre of moist loam, manured 10 cords with equal parts of sea weed and fish manure. Plants of Hovey's Seedling, fertilized with staminates, in rows three feet apart, and 18 inches in the drill, set in the spring, yielded the second year 2000 quarts, some of the berries being $4\frac{1}{2}$ inches in circumference. The expenses were, 10 cords manure, 20 dollars; 5000 plants, 10 dollars; labor the first year, 50 dollars; the three succeeding years, 80 dollars each; total for four years, 320 dollars. The profits would be 25 bushels of beets between the rows the first year, 10 dollars; 6,000 quarts strawberries the three succeeding years, at 12 cts., 720 dollars. Nett profit on half an acre for four years, 410 dollars, or 102 dollars per year. The experiment, however, appears to have extended to the first year of fruiting only, and the expenses might, doubtless, have been much lessened by horse cultivation.

INFLUENCE OF MANURE ON ROOTS.—Hoare, in his Treatise on the Vine, states that a bone was placed in a vine border, surrounded by dry clay. The vine sent a root directly through the clay to the bone. In its passage it threw out no fibres, but when it reached the bone, which was rich in fertilizing material, it sent out minute ramifications, and by degrees entirely covered it.

HARDINESS OF SWEET APPLE TREES.—In Wisconsin, where the thermometer not unfrequently sinks to 15° or 20° below zero, and where the fertility of the soil induces a very rapid growth in summer, the tenderer fruit trees are often severely injured in winter. A correspondent of the Prairie Farmer states that sweet apples are, for the most part, more hardy than acid ones, and better adapted to very severe climates. Out of one hundred and fifty varieties, twenty-two were sweet apples; of the latter, eleven proved themselves more hardy than any other eleven in the whole list, and only three of the sweet apples appeared to be tender.

DIFFUSION OF SEEDS.—In boring for water at a spot near Kingston-on-Thames, some earth was brought up from a depth of three hundred and sixty feet. This was carefully covered with a hand-glass, to prevent the possibility of any seeds being deposited on it, yet in a short time plants vegetated from it.

THE DEPARTED.

BY SIDNEY DYER.

How sad to return to the home where, light hearted,
We mingled in pleasures of friendship each year,
And find from its halls those stars have departed
Who once were the light and the life of its sphere.

Their forms only granted awhile as a token
Of love from their Maker, are doomed to decay;
Like cloud-wreaths at ev'ning which rude winds have broken,
Their vision-like beauty soon faded away.

We hung on their lips as they gave their last greeting,
And bade them adieu with a tear-mo-stened eye;
And sorrowed to think it would be our last meeting
Till we pass to their own starry home in the sky.

Tho' we hear not their songs, and beneath their light fingers
The chords of the harp may ne'er thrill to their strain,
Yet deep in the memory a melody lingers,
And in its sweet echoes we hear them again!

Farewell, dearest friends! ye have left us benighted,
Alone in the world our sad loss to deplore,
And think on the days when we lingered delighted,
To hear those loved voices that greet us no more!

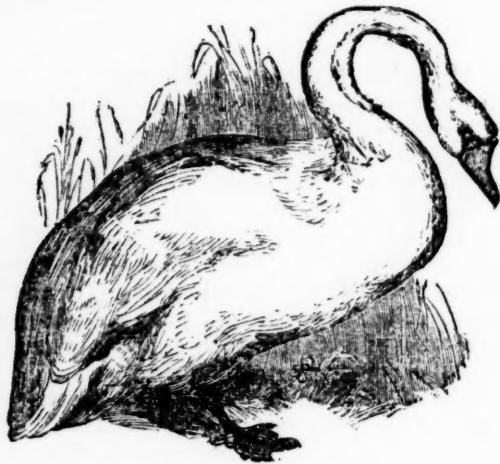
Yet why should we mourn them though parted in sorrow,
Or at the just judgments of heaven complain?
But wait for the dawning of that promised morrow—
In bliss we shall meet them to part ne'er again!
Louisville Journal.

The Poultry Yard.

The Swan.

The family of Swans, (*Cygnina*), embraces nine known species; viz., 1. The Mute Swan, (*Cygnus olor*;) 2. Polish Swan, (*C. immutabilis*;) 3. Bewick Swan, (*C. bewickii*;) 4. Hooper, or Whistling Swan, (*C. musicus* of Bechstein;) 5. American Swan, (*C. americanus*;) 6. Trumpeter Swan, (*C. buccinator*;) 7. South American Swan (*C. anatoides*;) 8. Black-necked Swan, (*C. nigricollis*;) 9. Black Swan, (*C. atratus*.) Of these, the four first-named are reckoned as belonging to Europe and Asia, the fifth and sixth to North America, the seventh and eighth to South America, and the ninth to New Holland.

Our cut represents the Mute swan, usually called in Europe, the domestic swan. The majestic and graceful movements of this bird have been admired from the earliest times. In England it is said to be a "Royal



71—MUTE SWAN.

bird, in which no subject can have property when at large in a public river or creek, except by grant from the crown." This species has been imported to America, and is occasionally found as an ornament to the grounds of gentlemen of taste.

The male and female mate in pairs. The female lays from five to seven eggs, and the period of incubation is six weeks. The young are called cygnets. They are at first clothed with greyish brown down, and they do not become entirely white till they are three years old. The bird is very long-lived—instances being known of its having lived more than a century. Its natural food is aquatic plants, but it readily eats any kind of grain.

There are other species of swans which appear to be susceptible of partial domestication. Martin states that the Hooper, as well as the Polish swan will breed in confinement, with access to a pond or sheet of water. This is true, also, of our American swan, which in several instances has been known to breed in a state of captivity. It is a noble bird, nearly as large as the mute swan, but is inferior to the latter in gracefulness and beauty.

The flesh of young swans is of good quality. Formerly it was held in great estimation. We learn that it is still served up in Europe, on occasions of public banquets. But swans are kept chiefly as ornament,—not for food.

The Canada Goose.

Closely allied to the swans, are some species usually included in the *Anserine* or Goose family. The Canadian, or American wild goose, (*Anser canadensis*,) and the Chinese goose, (*A. cygnoides*,) occupy, as a

writer observes, "a sort of debateable ground," so that naturalists have been in doubt as to which family they should be referred; and hence some have applied to them the name of swan-geese.

The Canadian goose is extensively known. It is a migratory bird, and in its semi-annual journeys, traverses the northern part of the continent almost from the equator to the pole; and there are but few of the inhabitants of this country that are not familiar with its shrill and animating cry. Its autumnal flight lasts from the middle of August to the middle of October, and the vernal flight from the middle of April to the middle of May. Various stops are made, however, at convenient points, between the winter and summer localities.

It breeds in its wild state, only at the north. Its favorite resort is the coast of Labrador, and the region about Hudson's Bay; though Hearne speaks of having seen great numbers within the Arctic circle, pushing their way still northward.

To the inhabitants of the regions where it breeds, the bird is regarded as an important source of subsistence.



72—CANADIAN GOOSE.

ence. Its arrival in spring is anxiously looked for, and the Indians denominate the month the goose moon. It is said that the carcasses of these birds are dealt out as rations to the men employed by the Hudson's Bay Company. "One goose, which when fat weighs about nine pounds, is the daily ration to one of the Company's servants during the season, and is reckoned equivalent to two snow-geese, (*A. hyperborea*,) or three ducks, or eight pounds of buffalo and moose meat, or two pounds of pemmican, or a pint of maize and four ounces of suet." [Richardson.] Those which are killed after the weather becomes cool in the fall, are frozen and kept in the feathers for a winter stock of provisions.

Richardson describes the habits of these geese in his *Fauna Boreali-Americanæ*, as follows:

"About three weeks after their first appearance, the Canada geese disperse in pairs through the country, between the 50th and 67th parallels, to breed, retiring at the same time from the shores of Hudson's Bay. In July, after the young birds are hatched, the parents moult, and vast numbers are killed in the rivers and lakes, when from the loss of their quill-feathers, they are unable to fly. When chased by a canoe, and obliged to dive frequently, they soon become fatigued, and make for the shore with the intention of hiding themselves, but as they are not fleet, they fall an easy prey to their pursuers. In autumn they again assemble in flocks on the shores of Hudson's Bay, for three weeks or a month previous to their departure southwards."

The Canada goose has been domesticated and is not an uncommon inhabitant of the poultry-yard, either in this country or in England. It does not breed till it is three years old. It is somewhat larger than the common goose, and its flesh is better; it has also more fea-

thers and of better quality. It is very hardy, and rears its young with much certainty. It is believed to be quite as profitable as the common kind; and considering its beauty and usefulness, it would seem desirable that it should be multiplied in a domestic state.

The Canada goose will breed with the common, and also with the Chinese goose,—but the hybrid offspring are in all cases, incapable of procreation. Some poultry-men, however, make it an object to breed mongrels, as they are called. They grow rapidly, and acquire a larger size than either of their parents, and their flesh is of so fine a flavor, and so highly prized, that it readily commands a higher price in the market. The finest mongrels are produced between the wild and the Bremen, and the wild and the Chinese geese.

It is stated on the authority of Buffon, that the Canadian goose, kept in a domestic state in France, was found to interbreed familiarly with the swans. Have any attempts been made to cause this goose to breed with the American swan, and with what success?

It may be remarked that the wild goose (*A. palustris*) of Europe, is the parent of our common domestic goose, and of course a distinct species from the Canadian goose.

The Farmer's Note-Book.

The Farmer's Wife.

EDS. CULTIVATOR—Be good enough to insert the following article from the *Springfield Republican*, and the remarks I have thereto appended, in your pages.

“The life of the farmer is so often made the subject of complimentary remark, so often praised for its peacefulness and independence, that the farmer's wife might very rationally be supposed to be the happiest woman in the world. From her relation to the “lords of the soil,” she should be the lady of the soil, a peaceful, healthy, independent woman. That the reverse of this is the general fact, will be universally conceded by the wives of the farmers.

“A young farmer arrives at an age when he thinks it time for him to get married and “settle down.” He has had a respectable education, and wants a woman who is his equal. He looks about him, and makes his choice. She is a girl bred beside him in the country, has been well educated; reared by careful parents, and is in the truest sense, a lady. She loves books, possesses skill and taste in music, and is in all points fitted to reign the queen of a happy home. She becomes the wife of the farmer, is ambitious to do as much as her neighbors, and her husband is soon avaricious enough to allow the woman of his love to become his most devoted drudge. From thenceforth her life is one of the most unremitting toil. It is nothing but mend and botch, cook and bake, wash and iron, churn and make cheese, pick up chips and draw water, bear children and nurse them. The family enlarges, the husband grows wealthy, becomes important in community, rides to town every day, takes his ease when he chooses;—but the cares of his faded and broken down wife know no relaxation. She may outlive her husband; but rarely does, and not unfrequently a second wife comes in to share in the money that should have been enjoyed by her predecessor, through a quiet old age of rest.

“This is no fancy sketch. It is drawn from life, and in every country-town and neighborhood, its truthfulness will be recognized. Now we despise the good-for-nothings of fashionable life as much as any one, and have no affection for drones in any hive. We are aware that circumstances sometimes demand extreme labor of the farmer's wife, but in New England those circumstances do not prevail, and while we would leave no woman to eat the bread of idleness, we would see the

class of which we are speaking released from that circle of everlasting drudgery which deprives them of the privilege of relaxation for a day, and the time which they would gladly devote to the maternal education of their children.

“From this life, the girls of our day are learning to shrink; not because they are lazy, but because they know that they are to be sacrificed. Not because the calling of the farmer is not respectable, but because they do not wish to become his mistress, maid-of-all-work, nurse and boot-jack. Now the foundation of all this wrong is in that avaricious spirit, handed down from father to son, which makes the dollar the standard of respectability, and land the only fountain of happiness. We hope to see the day when the farmer's wife shall share in the peacefulness and independence of the farmer's lot, and we call upon the ladies to engage in the reform themselves, and to teach the lords of the soil that there is something to live for besides potatoes, and that life can be enjoyed more truly by a proper preservation of the health, beauty, accomplishments and good spirits of their companions.”

The writer of the above, pronounces it “no fancy sketch.” I will not undertake to say how far the “fancy” was drawn on for the ground-work of the “sketch;” like many of the “tales” of the present day, it may be “founded on fact;” but at the same time, I am confident is not a fair representation of the condition of the people to whom it ostensibly refers. It is not, to be sure, improbable that a New-England girl may have had the misfortune to be united to a man who is “avaricious enough to allow her to become his most devoted drudge;”—he may have grown wealthy, and become “important in the community;”—may “ride to town every day, and take his ease when he chooses;” while she, broken down by toil and care, may have met a premature death—a calamity by which “a second wife comes in to share the money that should have been enjoyed by her predecessor!”

Such cases should, certainly, excite commiseration for the wife and censure for the husband, though it is most likely his culpability has arisen rather from thoughtlessness than “avariciousness.” But the preservation of his wife's health, the alleviation of her burdens, and the advancement of her happiness, should have been his constant aim; and if he has neglected or overlooked these, he has not duly regarded the injunction of the Apostle—“So ought men to love their wives, as their own bodies.”

But it would be wrong to suppose that farming in New England is so lucrative a business that those who follow it generally get rich, or that the most thrifty among them spend much time in riding to town and taking their ease; and it would be an unjust imputation on the character of our farmers, to suppose that, as a class, they cherish the boorish disposition that would degrade a wife to “maid-of-all-work, nurse and boot-jack,” or that they are generally influenced by “that avaricious spirit which makes the dollar the standard of respectability, and land the only fountain of happiness.” Hence the “sketch,” except, perhaps, as an individual description, is untruthful.

That the wives of New England farmers have their trials, (“hardships,” if you please,) in common with woman in general, is admitted; but that their lot is comparatively hard, I think is disproved by a careful survey of rural life in general. In support of this position, I might institute parallels in reference to different sections or countries, but remembering that comparisons are sometimes “odious,” I forbear.

The circumstances in which New England women are placed, are in some respects peculiar. It is often remarked that the greatest trouble experienced in con-

ducting farm operations in this section, is the difficulty of obtaining female labor. This arises from the existence of numerous manufactories, where many females find ready employ at good wages. The consequence is that most of that class who "go out to work," go to the "factories," leaving but few to be obtained for the performance of ordinary "house-work."

Thus it is seen that "circumstances" do "prevail" in New England, by which the management of domestic affairs, necessarily devolves in a great degree on the mistress of the family and her daughters. To counterbalance this, there are many advantages. Great pains are generally taken to lessen and lighten female labor. In the construction of houses, and in all the internal arrangements and fixtures, the important principles of convenience and *labor-saving*, are kept prominently in view. Water, for all purposes, is commonly brought into the house, and in many instances, into all the apartments where it is wanted. The value of this item, can, perhaps, be best appreciated by those who have known something of the labor of "toting" water, sometimes a distance of many rods, up steep ravines or hillsides. Fuel is generally secured in a dry condition, in a building attached to the dwelling, where it can be reached at all times, without exposure. In the culinary department, there are all the improvements in economising labor, which Yankee ingenuity has been able to devise. In all operations requiring the greatest outlay of strength,—such as washing, ironing, churning, butter-working, cheese-making, &c.,—there are machines and apparatus which in some instances entirely supersede the use of hand-labor, and in others reduce it to a small amount.

Of the facilities enjoyed in New-England, for education and the cultivation of the mind, I have no occasion to speak, at present; they are sufficiently indicated by the accomplishments which the writer in the *Republican* attributes to the farmer's wife. *OBSERVER. Hartford county, Ct., August, 1849.*

Circular from the Patent Office.

We are pleased to receive the following circular, issued by the Commissioner of Patents. The inquiries are directed to the most important subjects, and are so framed as to elicit the principal facts relating to each. If properly responded to, as we trust they will be, they will bring out a mass of valuable information in regard to the agricultural resources of the different sections of our country:

THE COMMISSIONER OF PATENTS, in execution of acts of Congress, desires to procure information from Planters, Farmers, and others, on the following and any other points that may occur to you, connected with agriculture:

WHEAT.—Your experience as to varieties, difference in weight, and of time in ripening; enemies and diseases, soil and manures best adapted to.

OATS.—What varieties have you tried, and with what results, particularly as to time of ripening; with their estimated value as compared with corn as food; is the cultivation of the oat becoming more or less popular, and for what reason?

RYE.—Have you knowledge of any new and valuable variety; to what use is it applied; have crops diminished of late years, without any apparently corresponding diminution in the fertility of the soil, and to what influence is it supposed to be attributed?

BARLEY.—Have any new varieties been tried, and with what results; to what uses is this grain applied in your State; if not cultivated, is it forbidden by your soil and climate?

MAIZE, (INDIAN CORN.)—What varieties most esteemed, and for what reasons; what the difference in

time of ripening; is it liable to change of character and climate, and other influences, and your observations on that point; give the estimated value of the husk as compared with the blade, and of both as compared with good hay, weight for weight; what is the value of green corn for soiling cattle, and especially for producing milk; your experience as to feeding grain, whole or ground, cooked or raw?

RICE.—Variety cultivated; describe any new and valuable process for its cultivation or preparation for market.

(**NOTE.**)—As to all these grains, please state the cost of production and usual weight, and the probable average per acre and actual aggregate product, if known, of each in your State; whether the average product per acre has increased or diminished; whether the weight per bushel of the various grains is fixed by law in your State; and what weight is prescribed for each.

HAY.—State the comparative value, as food for stock, of clover timothy, and mixed hay; the grass seeds preferred in laying down meadows; the average yield per acre; describe any new process in curing; have meadows been irrigated in your State, and with what effect?

PEAS.—For what purpose cultivated in your State; for food, or for improving the soil; estimated value as food for stock, compared with Indian corn; the most esteemed variety for field culture; average product per acre; value of haulm or vines compared with other fodder; average price per bushel in the last year.

ROOT CROPS.—Irish and sweet potatoes, turnips, carrots, beets, mangel-wurtzel, artichoke, and other varieties; comparative value; cost of production; weight per bushel; and the average per acre, and aggregate produce for your State.

COTTON.—Average yield per acre and per hand in your State; aggregate yield of the whole State for 1849; describe new varieties and processes of cultivation; manures best adapted to; cost, per pound or bale, of production; freight, charges, commissions, &c., paid by the planter.

SUGAR.—Whether of cane or maple; the product per acre; describe any new process of cultivation or manufacture; variety of cane cultivated; its enemies and diseases; cost of making sugar; freight, charges, commissions, &c., paid by the planter.

HEMP.—On this head give any information that you may deem valuable and new as to varieties, processes of cultivation and preparation for market; soil and manures best adapted to; cost of production.

BUTTER.—Quantity made in your State; average annual produce per cow; are cellars or spring-houses preferred?

CHEESE.—Same questions.

HORSES AND MULES.—Number raised in your State; average value of each; comparative value for farming purposes; where is your market for them?

Number of Horned Cattle in your State; average value of at three years old; where driven to market; cost of keep per head per year; which of the improved races is preferred?

SHEEP HUSBANDRY.—What the prevailing races; what the condition of this branch of industry; amount of wool clipped in the year, and average weight of fleece of different races; cost of keeping sheep through the year per head; where your markets; what your system of selling; have you wool depots, and are they found advantageous for wool grower and manufacturer; what number killed by dogs in your State?

HOGS.—Average weight at a given age; average weight consumed per head; proportion of live to nett weight, and cost of production per pound.

RAIN.—Time and degree of highest and lowest range of thermometer, and the mean temperature of the year;

also, inches of rain water in each month, and aggregate for the year.

LABOR.—Cost of, with and without boarding, and cost of boarding.

TAR AND TURPENTINE.—Quantity and value of produced per hand.

PLASTER and other FERTILIZERS.

LIME.—If used as an improver in your State, how much is thought to be best per acre, and how often applied?

ORCHARDS: fruits, transplanting of trees, &c.—Information on these and kindred matters will be of universal interest.

On the cultivation of the VINE, on GRAPES, and AMERICAN WINES, communications are particularly solicited.

P. S. Please answer this as soon as convenient after you procure the information, and before the 1st of December; and, in the mean time, please name any one to whom this circular may be sent in the hope of fuller information. If not room on the circular, please reply on a separate paper, referring distinctly to the queries.

Phosphate and Carbonate of Lime.

The favorable effects of phosphate and carbonate of lime on vegetation, have been shown in repeated instances; and it has been considered important to ascertain by what means these substances find their way into vegetables. M. Lassaigne, a French writer, has published the details of some interesting experiments made by him in reference to this point, a translation of which we find in the London *Farmer's Magazine*. The experimenter directed his investigations to the following inquiries:

1st. If phosphate of lime, such as is found in bones, can be dissolved in water containing carbonic acid.

2nd. In what quantity it can be so dissolved.

3rd. If this solution can or cannot favor the germination and vegetation of cereals.

4th. Lastly, if in different parts of the fully grown plant, we could detect a certain quantity of this same phosphate.

FIRST EXPERIMENT.—*The phosphate of lime, (as found in bones) is soluble in water saturated with carbonic acid, at ordinary pressure and temperature.* This proposition, which we have deduced from experiments, has been by Dumar and Gasparin asserted without proof experimental. It is in this state of things that in 1846 we announced to the academy of sciences, that water saturated with carbonic acid, at the temperature of 50°, and at the mean pressure of the atmosphere, dissolves of the phosphate of lime of bones 75-10000 parts, or 1.1333 part of its weight. We stated this solution is decomposed by heat, and that the phosphate is also thrown down by adding potash or ammonia to the solution, so as to saturate the carbonic acid. We also found that water containing carbonate of lime in solution by carbonic acid had, likewise, the power of dissolving small quantities of the bone phosphate. After settling these points we tried several experiments on fresh bones, and on bones which had lain in the earth for some time. The result is, that the latter, when reduced to the size of a nut, and brought into contact with water saturated with carbonic acid, yielded at the end of eight or ten hours, a certain quantity of the inorganic bases, that is to say, of the carbonate and phosphate of lime. This quantity we find to be increased by reducing the bones to powder. An experiment to ascertain the relative proportion in which the phosphate and carbonate of lime are dissolved gave results differing but little from those obtained by Berzelius. Our results may therefore be considered to have established the fact that the salts of lime of the same chemical composition as bones, after being allowed to

decompose for some time in the soil, can be dissolved in rain water in consequence of the carbonic acid it contains in solution.

SECOND EXPERIMENT.—The preceding experiments naturally lead us to inquire what effect this solution of phosphate and carbonate of lime could produce on vegetation. Before studying this question, which is interesting both in an agricultural and physiological view, we thought it advisable to place ourselves in the most favorable situation to answer it correctly.

1st. We sowed four grains of wheat in two glass vessels of the capacity of about 25 cubic inches, each containing about 4,000 grains (?) of sand, purified by washing with muriatic acid. Each vessel was watered so as to render the sand moist, the one with *water containing carbonic acid alone*, and the other with *the same water also holding in solution the phosphate and carbonate of lime*.

2nd. The two vessels were then placed on a porcelain plate, and covered with a large bell glass, in order to preserve them from contact with any dust floating in the air. This apparatus was so placed on a wooden stand that it might be placed in the sunshine; the temperature of the room kept as nearly as possible at the 50°. The wheat all vegetated in ten days, the plumule was developed as usual, and gave two leaves to each plant, of the most beautiful green color. After this the development of the two sets of plants were as follows: The growth of the grains of wheat watered with a solution of carbonic acid, and phosphate and carbonate of lime, was much more rapid than those watered with the solution of carbonic acid alone; the leaves furnished by the former grains were generally larger, stronger, and of a deeper green. But 25 days after germination, the vegetation of the plants, placed in such abnormal conditions, languished, the leaves assumed a yellow color at their extremity, and this alteration was gradually propagated through the whole plant. At this epoch, the height of the leaves produced by plants watered by carbonic acid alone was from 2 $\frac{1}{4}$ to 2 $\frac{3}{4}$ inches in height, whilst the leaves produced by the grains grown in the sand watered with the solution of bone earth were from three to four inches high. The plants were drawn out of the sand as soon as ever they appeared to lose their vigor, and after being well washed with water, they were dried to ascertain the quantity of dry matter they contained. The leaves grown with the solution of bone-earth contained 0.193 grammes, while those from the other experiment contained only 0.153 grammes of dry matter. Thus giving, in both cases, the advantage to the experiment with the bone-earth.

THIRD EXPERIMENT.—The results of this agreed with the preceding. The vegetation caused by the solution of bone-earth again exceeded that caused by the carbonic acid alone, in the proportion of 12 to 8. The development of the roots of each lot of plants, was also in the same proportion. It was not sufficient to have shown by these direct experiments the stimulating effect of the solution of phosphate and carbonate of lime; it was also requisite to ascertain whether these substances had been absorbed during vegetation. To ascertain this, we burnt off the dry leaves in a platina crucible, and obtained from the leaves of the wheat grown with the solution of bone-earth, *four or five times as much inorganic matter* as from those grown from the solution of carbonic acid alone. And the further analysis of these ashes has shown the presence of phosphate and carbonate of lime in much larger quantities than in the other experiment. These results, by positively demonstrating the special influence of these salts of lime, also enable us to explain the action of certain manures. Besides the gaseous and ammoniacal products which are yielded by the decomposition

of animal matters, the phosphates and carbonates of lime which they contain must also perform an important part in the assimilation of vegetables. Certain species of these latter require for their perfect development, certain mineral substances which decomposing animal matters can supply, and which the plants obtain from them by assorting them in a state of solution.

In relation to the above, the translator adds the following:

There is one very important conclusion to be drawn from this experiment which the author has overlooked. It was not to be wondered that the plants watered by carbonic acid refused or were unable to come to perfection, *but the fact that even bones were not able to mature the plants of wheat* is rather startling, and we refer to it here as another corroboration of the view advocated by one of the parties in a recent discussion "on the composition of manures," which has been carried on in this magazine for some time past. Notwithstanding the acknowledged importance of phosphate of lime, it would seem, both from the above discussion and these experiments by Lassaigne, that it is not sufficient of itself to bring the plant to maturity. If this be established as a fact, it ought to influence farmers in the purchase of their manures, of which it would appear that those only can be of permanent benefit to his farm which contain many other ingredients equally essential to vegetation.

Analyses of Manures.

At a late meeting of the Highland Agricultural Society, Mr. FINNIE spoke of the great advantage which had been derived by farmers in Scotland from the analyses of portable manures, upon which, he estimated, nearly one-half of the green crop of that country is dependent. The amount of guano, for instance, imported in 1837, was upwards of 220,000 tons. Great adulteration had been practiced with guano; and bone-dust had been mixed with ground oyster-shells. Various manufactured manures, of the constituents of which the farmer could not be acquainted, were offered for sale. In illustration he related the following: Some years ago I joined with two or three farmers in the purchase of some tons of nitrate of soda. None of us derived any benefit from the application of it. Most fortunately I had some left—got it analysed by Mr. Kemp at the College; and when the secret was explained, it was to a great extent mixed with common salt. I heard of a cargo shipped to a party in London; a chemist was ordered to examine it before taking it from the ship. The adulteration was detected, and immediately the ship was ordered off to Scotland, and sold amongst the farmers. I once purchased a quantity of guano from a party in Leith. Professor Johnston had given an analysis of it, but the sample sent to him had been very different from the stock. I found upon taking delivery that all was not right. I then had a sample from the stock analysed, and had no difficulty in procuring an abatement of 10 per cent. from difference of value. I cannot conceive how any agriculturist who expends his hundreds a-year upon portable manures is justified in applying them before being tested, and would grudge a few shillings per annum to obtain a chemist of skill who could satisfy him as to the purity of the article upon which he is not only expending a large sum of money, but upon the genuineness of which his green crop, and every succeeding crop in the rotation, is dependent; for, without a knowledge of the nature and properties of the materials employed by the agriculturist, it is evident that the result of many of the laborious and extensive processes incident to his daily occupation must be a matter of mere chance—thus contributing more than any thing else to the precariousness of the profits upon which his prosperity depends.

I may be told this is a tenant's question, and let him look after his own interest and he will fare the better; but I hold whatever is necessary for the tenant cannot be dispensed with by the landlord; and if from not having a ready and cheap way of having his manures analysed, the loss of a crop is the consequence, is not the landlord's rent endangered? But I would respectfully submit that these portable manures, now so important an element in good farming, and for which I would say a chemist's services are required, leaving every other consideration, have done much already for the proprietors of land.

West-Highland Cattle.

In several of the last volumes of *The Cultivator*, we have given cuts and brief descriptions of the West-Highland cattle of Scotland; and we have more than once expressed our desire that some measures might be taken for the introduction of this valuable breed into this country. The following notice of them occurs in an account of the Falkirk Tryst, a celebrated Scottish fair for the sale of cattle and sheep. The account from which our extract is taken, appeared in the *Edinburgh Quarterly Review*.

Every isle and holm which opposes its rugged crags to the fury of the Western Ocean between Islay and the Orkneys; every mainland glen from the mull of Cantyre to Cape Wrath, pours in its pigmy droves, shaggy and black, or relieved only, as to color, by a sprinkling of reds, and of duns graduating from mouse to cream-color. From Northern and Eastern Sutherland, Caithness, Ross, and Inverness they come in longer on the leg, smooth [short-haired] and vulgar. From central Argyll, Perth, and from some of the islands, come the carefully bred West-Highlanders; these are the flower of the show, engage every one's talk, and attract every one's attention; every individual of them is a delight to the eye of a connoisseur. Aberdeen and Forfar send in droves of large and bony, but useful bullocks. A few Ayrshire cows and heifers for the dairy, some miscellaneous lots and a few Irish, make up the account. We do not know the numbers; we have heard of 30,000, and again of 60,000. The October show is the most imposing. The almost universal color is black; the moor is in appearance, one black mass. You may be accommodated with every size, from that of a Newfoundland dog, to a bullock of one hundred stones. The cattle are mostly in the hands of dealers, having been bought up at the northern and western markets; many, however, of the best West-Highlanders are brought to the Tryst by their breeders, and you may see a kilted laird from the Hebrides standing, like Rob Roy, at the tails of his own bonny stots and queys. A few small lots of a score each may be found, but they generally run from 50 to 300 and upwards. A purchaser of less than the whole of one of these large lots gets his number, not by selection, but by a cut: a drover passes through the black mass and cuts off by estimation the number; they are then counted and made up to the required figure by alternate selections on the part of the buyer and seller. No trading class can furnish more intelligent men than the Scotch stock-farmers—perhaps, indeed than the Scotch agriculturists generally; men well educated, of courteous and simple manners, of great intelligence and much general information, enterprising, and keenly alive to every reported improvement.

Top-Dressings for the Potato.

EDS. CULTIVATOR—If, as Professor Johnston thinks, "the benefit to be derived from a skilful treatment of the potato plant, does not terminate with the greater immediate crop we reap, but extends also, into future years, improving the seed, and rendering its after cul-

Table No. 1.

KIND OF TOP-DRESSING	Quantity per acre of top-dressing.		Cost per acre of top-dressing.	Produce per acre, in tons.	Value per acre of produce.	Increase of product per acre by top-dressing.	Cost per ton of increased product.	Profit per acre in consequence of top-dressing.
	Cwts	Tons. cwts. qrs.						
1. None,	0	0 0 0	12 15 0	\$117 93	0 0 0	\$0 00	\$0 00	
2. Sulphate Soda,	2	3 75	12 15 0	117 93	0 0 0	no inc loss.		
3. Sulphate Magnesia,	1 1/2	3 12	13 5 0	122 53	0 10 0	6 25	1 50	
4. Sulphate Ammonia,	1 1/2	7 75	14 1 0	134 13	1 15 0	4 43	8 45	
5. Nitrate Soda,	1 1/2	7 75	16 0 0	148 00	3 5 0	2 38 1/2	22 31	
6. Sulphate Soda,	1 1/2	6 19	18 0 0	166 50	5 5 0	1 18	12 38	
7. Nitrate Potash,	1 1/2	10 75	18 10 0	171 12	5 5 0	1 87	42 44	
8. Sulphate Soda,	1 1/2	6 19	18 16 2	171 70	6 2 2	1 01	50 58	
9. Nitrate of Soda,	1	7 25	22 10 0	208 12	9 15 0	0 74 1/2	52 94	
Sulphate Magnesia,								

Table No. 2.

KIND OF MANURE.	Quantity per acre of Top-Dressing.		Cost pr acre.	Produce per acre, in tons, &c.	Value per acre of produce.	Increase of product by the dressing.	Cost per ton of increased product.	Profit pr acre in tons' value of dressing.
	Cwts	Tons. cwts. qrs.						
1. None,								
2. Salt,	1 cwt	4 cwt	\$3 00	14 17 0	137 36	1 7 0	\$2 23	\$9 48
Quick Lime,	4 cwt	13 50	15 5 0	141 06	1 15 0	7 72	2 68	
3. Nitrate of Potash,	2 cwt	11 25	15 13 0	144 76	2 3 0	5 23	8 63	
4. Bone Dust,	18 bu.	15 00	16 3 0	149 40	2 13 0	5 66	9 13	
5. Farm Yard Manure,	10 1/2 bush.	9 17	16 19 0	156 79	3 9 0	2 66	22 75	
6. Nitrate of Soda,	2 cwt	13 87	17 15 0	164 18	4 5 0	3 26	25 43	
7. Nitrate of Ammonia,	3 cwt	10 50	19 11 0	180 84	6 1 0	1 74	15 45	
8. Guano,								

Table No. 3.

TOP-DRESSING.	Quantity.	Cost.	Produce.		Value.	Increase.	Cost of inc.	Profit.
			Tons.	cwt. qrs.				
None,			7	10 0	\$69 37			
Soot,	40 bush.	\$4 17	10	7 0	95 75	2	17 0	\$1 46
Manufact'd Guano, 2 1/2 cwt.	9 37	9	7 0	86 50	1	17 0	5 07	7 76
Common Guano, 3 cwt.	7 50	11	7 3	105 37	3	17 3	1 91	9 59

ture more productive," it behoves my brother farmers to pay attention to everything that can possibly improve it, as it is undoubtedly the most profitable and certain crop we raise. Therefore, I wish through your valuable journal, to bring under their notice the advantages of "top-dressing" with artificial manures. But at the same I wish them to understand that I am not speaking from practical experience, for until within the last month, I have not myself thought of it, though I hope next year to try it, and if so to give you the result.

Happening into a book auction one market night, I purchased "The Potato, by G. W. Johnson," a book published in London as one of a series, entitled "The Gardener's Monthly Volume." I have studied it thoroughly, and think that others could do so with great advantage, but as it is an English work not reprinted in this country, that will be impossible for most of your readers; therefore I have taken the liberty of preparing from it the accompanying tables and remarks, illustrative of the benefits to be derived from "top-dressing." First, let us examine some experiments made by Mr. Fleming, of Barochan. He had a light, loamy soil, with a hard retentive subsoil. He planted his potatoes on the 18th of April, in rows 26 inches apart, manuring the bottom of the rows with farm-yard manure, at the rate of 40 cubic yards per acre. The top-dressings were added on the first of June.

The Potato was, what in England is called the Early American. Table No. 1 shows the result. The price of potatoes that fall was £1.13s, (say \$9.25) per ton, and the cost of the top-dressing includes hauling and putting it on.

Is not table No. 1, worthy of attention, of study? If, after our potatoes are planted, we can by an outlay of \$7.25, reap an additional clear income of \$82.94, shall we not do it?

This table (No. 1,) is worthy of study on another account. What produced the great increase in No. 9? Was it the soda? The soda alone (5) in larger quantity only gave 3 1/4 tons increase. Was it the magnesia? The magnesia alone (3) only gave 1/2 ton increase. I am rather disposed to give the soda the credit for the crop, as potatoes do not contain the one-half of one per cent. of magnesia; and Prof. Johnston, in his suggestions for experimental agriculture, mentions a crop of 30 tons produced with a mixture of one-third nitrate, and two-thirds sulphate of soda; whilst, on the other hand, Fleming mentions another experiment made by him, in which the magnesia only gave 11 1/2 tons. Yet if the soda made the crop, why did not the soda (5) by itself do as well? Possibly there was some acidity in the ground, which neither salt by itself corrected, but which when combined they operated on.

The experiments as per table No. 2, were made entirely with "top-dressing," the land being prepared on what is known throughout Ireland as the *Con-acre* system. That is land that has been long in grass, is marked out in ridges, the sets are laid on the sod about a foot apart, and covered about three inches deep with soil from the furrow. A shocking bad system, but one that occasionally yields a good crop. The sets were planted on the 15th April, and after they had sprouted, but before the shoots reached the surface, the dressings were applied, and an additional quantity of about two inches of earth placed upon the top. This was done on the 20th of May. The dung was well rotted. The other manures were mixed with dried mould before they were applied. The salt was that which had been used in a provision store, and consequently contained a considerable quantity of blood, fat, and other animal matter, which probably made it of greater utility than pure salt would have been.

The results as per table No. 2, are curious. Salt and lime produce the additional crop at next to the least cost per ton, yet they are fourth on the list as to profit. They produce cheap, but not in sufficient quantity. In this experiment, the nitrate of potash is the worst, making the extra product cost \$7.72 per ton, whilst in the one above, it made it cost only \$1.87, and was third best out of the nine, but then stable manure was used. The bone-dust and farm-yard manure are nearly equal, the former growing at a less cost, but the latter in greater quantity. Both of these will benefit the next crop, in all probability the farm-yard manure the most. The guano produced the greatest quantity at the lowest cost,

but I doubt whether it will in any manner avail the next crop; but still in this experiment it was undoubtedly the best, as the \$20 profit it made over either of the others, will more than buy any kind of manure wanted the next season. But the difficulty is, when the farmer has the \$20 in cash, to get him to spend it again for manure.

Experiment No. 3, was made by Mr. Campbell, of Derry. The potatoes were planted on the 7th of May, in ground prepared in the usual manner, and manured with 30 tons farm-yard dung per acre. The top-dressing was applied early in June.

In this case again, the guano is the most profitable, though here it does not produce at the lowest price per ton.

I should like to make some further remarks, and ask my brother farmers a few questions for my own information, but must now bid them adieu, with the promise, with your permission, to see them again after they have reflected upon top-dressing for potatoes. S. S.

Improvements in Agriculture.

EDS. CULTIVATOR—The table giving the estimate of the principal products of Seneca county in 1848, published in the July No. of your paper, is rendered interesting by calling to mind several important considerations.

In the census of 1845, Seneca county stood in her agricultural productions, above the average of the State. The estimate for 1848 shows a large increase per acre, and a much larger gross increase upon the productions of 1845, as will appear from the following extract, taken from the estimates of both years:

Year.	WHEAT	BARLEY.	OATS.	CORN.
	bush'l's pr. ac.	bush'l's pr. ac.	bush'l's pr. ac.	bush'l's pr. a.
1848.	641,96	17.9	124,195	21.7
1845.	483,773	14.8	50,071	13.6
1840.	4398,505	11,147	232,416	354

One interesting consideration that this table suggests, is, that the farmers of Seneca county, availing themselves of their superior soil and location, and the lights that science is throwing upon the business of agriculture, are making a noble stride towards the highest state of good husbandry.

Another interesting consideration is suggested in the fact, that notwithstanding the superior advantages and management of the farmers of Seneca county, still the income on their capital and labor, is vastly inferior to that of any other of the great industrial interests of our country; and as upon the prosperity of agriculture depends the prosperity of all other interests, it shows how important it is that it should receive, both directly and indirectly, in every practicable way, the first consideration and the fostering care of our government.

Seneca county has about 194,700 acres of land. That land, together with the stock and utensils of her farmers, constitute their invested capital. That capital cannot be estimated at much less than \$5,000,000. Their annual agricultural products amount to about \$1,200,000, or 25 per cent. upon their capital. The income of all the other great industrial interests of our country, is shown by the census to be from one hundred to two hundred per cent. upon their capitals.

The population of Seneca county in 1845, was 24,972. The number of voters was 5,459, four-fifths of whom were employed in agriculture—if the same proportion exists there, in their population that usually prevails in the United States. Of course, the income of each individual engaged in that county in agriculture, was less than \$300 during that year. The income of each individual engaged in the other pursuits, as shown by the census, averages annually near \$700.

Another important consideration is suggested; that while the grain-growing business produces less on its capital and labor than is produced in other pursuits, yet the grain growing business of that county is better than that of wool-growing, and the farmers there will readily say that they cannot afford to grow wool on land which is well adapted to the growing of grain.

Another important consideration is, that although in Seneca county, as elsewhere, the business of agriculture produces less on its capital and labor than that of other interests, still it is the most desirable and commendable business of any in which the people of our country are engaged.*

First, because the capital invested in it is more secure than that invested in any other business.

Second, because men engaged in it enjoy greater independence. They are less dependant upon each other in that pursuit, than in any other.

If their income is less, their desires are less, and with a reasonable exercise of industry and prudence, a certain amount of income over expenditure, is always available.

In the business of agriculture, men of abilities and acquirements may enjoy as high degree of consideration as those do in almost any other employment.

The business is healthful, morally and physically, and while it produces as few causes for disquiet, I can conceive of no business out of which grow more sources of enjoyment.

It is a business, however, which is susceptible of infinite improvement, and men who, as individuals or statesmen, contribute most to such improvement, are deserving of the highest consideration from their countrymen.

One of the most important improvements yet to be made, is that science and mind may be brought to bear, so that labor may never be wasted by being misapplied.

Another improvement is, to devise such implements as may lessen the amount of labor to be performed.

Another and not less important improvement, can be made in opening to the products of the farmer, an unrestricted market at home and abroad, and in creating facilities for transmitting such products to such markets. A. FARMER. Hillsdale, Columbia county, N.Y., July 16, 1849.

American Institute.

The Twenty-second Annual Fair of this Association will be held as follows: Agricultural and Horticultural Exhibition on Tuesday, the second of October, at Castle-Garden, New-York. Plowing and Spading Matches on Thursday, the 4th of October, at Flushing, Long Island; Central Convention of Fruit Growers, on Tuesday, the 2nd of October, in the New Saloon, at, Castle Garden; Catle Show on Wednesday and Thursday, the 10th and 11th October, at the corner of Twenty-Third Street, and Fifth Avenue, rear of Madison Cottage.

Liberal premiums are offered for Short-horn, Hereford, Devon, Ayrshire, Alderney, and "native" cattle; also, for blood and farm-horses; for Merino, Saxon, South Down, and long-wooled sheep; for swine, poultry, &c.

The general arrangements for the exhibition are comprised in the following programme:

FIRST WEEK. Monday, Oct. 1.—Will be appropriated for the arrangement of the contributions. Vegetables, Fruits and Flowers, for the Horticultural Room, should be brought this day before 12 o'clock.

Tuesday, Oct. 2.—The exhibition will open to

* By the census of Massachusetts in 1845, the amount of capital employed in manufacturing and the mechanic arts, was \$16,101,217. The number of hands employed was 129,013. The value of their products was \$87,924,093 or near two hundred per cent, income upon capital employed, and near \$700 annual income from the labor of each individual.

the public at 9 o'clock, A. M., and close at 10 o'clock, P. M., which arrangement will continue during the fair. The opening address will be delivered this evening, at 7½ o'clock, in the front saloon. A band of music will play during the evening. At 9 o'clock, a grand display of fireworks.

Wednesday, Oct. 3.—The Steam Engine, with moving machinery, will be in operation and continue during the Fair.

Thursday, Oct. 4.—Spading Match, Plowing, and Testing of Plows, at Flushing, L. I., in conjunction with the Queens County Agricultural Society. Steam-boats will leave the Battery at an early hour for the Plowing ground. An address on the field.

Saturday, Oct. 6.—Fireworks this evening, at 9 o'clock.

SECOND WEEK.—*Monday, Oct. 8*—Great Show of choice Roses and Dahlias at 12 o'clock, for special premiums. Cattle and other live stock to be exhibited on Wednesday, must be entered on the books this day, and pedigrees delivered to the clerk, at the Committee-room, at Madison Cottage, corner of Fifth Avenue and Twenty-Third Street. If previously sent to A. Chandler, Sup. Agent of the Institute, they will be attended to.

Wednesday, Oct. 10.—The Cattle Show will open at 10 o'clock, A. M., at Madison Cottage, corner of Fifth Avenue and Twenty-Third Street, when all the animals must be on the ground.

Thursday, Oct. 11.—The second and last day of the Cattle Show. The Hon. Levi Woodbury will deliver the Anniversary Address at the Tabernacle, at 7½ o'clock, P. M. Tickets gratis, may be had of any of the managers, or at the Clerk's desk. Music by an accomplished choir, under the direction of Mr. George Andrews.

Saturday, Oct. 12—Pyrotechnic exhibition for premium, at 9 o'clock, P. M. Each exhibitor will be required to fire three pieces. Entries to be made on the books before 12 o'clock, M.

Wheat Culture.

EDS. CULTIVATOR—Will you or any of your correspondents be so kind as to answer the following queries through the columns of your excellent journal? viz:

1. What is the proper time for a clover fallow to be made for wheat?

2. Shou'd the clover be cut or grazed before fallowing?

3. What is the proper depth to plow to insure the greatest yield?

4. Is early sown wheat more subject to the attack of the fly?

The above questions cannot, of course, be answered with precision,—as the circumstances of soil and climate will have their influence,—but replies may perhaps, be given that would be generally applicable.

JUVENIS AGRICOLA. *Long Hill, Amherst Co., Va., July 20, 1849.*

A fallow for wheat is generally commenced in June, or the last of May. There is a difference of opinion as to whether it is best to turn in the whole growth of clover, however great it may be, or whether it should be partially grazed or mowed off; and we do not think that experiments have been made with sufficient accuracy to settle the point. But on one point, we think there is a general agreement among farmers who are in the practice of plowing in clover, and that is, that it is best to let it pass the stage in which it contains the most sap, before it is plowed under. The reason is, that a great quantity of green watery matter, produces an acid in the soil, which is injurious to vegetation. On this account many prefer having the clover partially fed off, and that what is left is fairly turned towards ripening.

It is common to plow fallows once or twice after turning in the sod, previously to being sown; the first (or rather the second) plowing to be done when the sod is fairly dead, and partially decomposed, and the next just before seeding, which is generally from the 10th to the last of September.

The practice has been considerably adopted of late years, to defer the plowing of clover-ley till about the time for sowing wheat, and to sow immediately on the furrow, after but one plowing. In this case it is common to pasture the clover, more or less, according to the wants of the live-stock of the farm, or to mow the first growth and save it for hay. This practice has been quite successful, especially on loamy soils, or such as do not require to be much worked to render them sufficiently friable. The great benefit of fallowing, is on land which either requires cleaning from foul plants, or from its tenacity, requires a more thorough pulverization and aeration than can be effected by one plowing.

The depth of plowing, on ordinary wheat soils, is generally seven inches. It is found that stiff soils require deep stirring; and it is not unfrequently the case, that the subsoil, in our best wheat districts, is as rich or richer in the elements which nourish wheat, than the surface soil. It only needs the action of the air to develop or render soluble its valuable alkaline and other properties. There are lands of a different character, however, on which wheat is raised—lands on which the subsoil does not thus abound with valuable saline matter; and on these lands a less depth of furrow, with a proper use of the subsoil plow, is deemed preferable to a deep burying of the surface soil, and the consequent result of bringing to the surface the comparatively barren subsoil.

Early sown wheat may form a harbor for the Hessian fly in the fall—as it is not unusual for a generation of that insect to be produced before the setting in of winter. It may not be perfected in the fall, but will remain in the larvæ or in the "flax-seed" state till spring, when it is matured and brought out by a few warm days, ready to attack the crop in full force. Where this insect is known to prevail, it is, therefore, deemed advisable to defer the sowing of wheat to so late a period that the plant would not make its appearance till cool weather should render the fly incapable of mischief.

But it should be remembered, that the course which would be a protection against the Hessian fly is *not* a protection against the wheat midge, miscalled "weevil." Early winter wheat is the most likely to escape the latter insect, and that which is rather late, most subject to injury. The farmer must, of course, make his calculations as to which of these enemies, he is in the greatest danger. If he is most likely to be attacked by the Hessian fly, he will sow late; if by the midge, he will sow early, and an early kind.

Management of Sheep.

At a late meeting of an English Farmers' Club, the subject for discussion was,—"The best method of managing a flock of sheep for breeding purposes." Mr. Hardwick remarked that in regard to breeding ewes, he should prefer keeping them well and even all the year round. He did not like sudden changes from high to low feeding, or *vice versa*, though he thought ewes might advantageously have more food of a good quality after they were half gone with lamb, than before. As to the most profitable way of making up lambs for sale, if he wanted a horse to work, he would not give £5 more for it because it was fat; so with lambs, if he wanted lambs to work, he would not give 5s. more for them because they were fat, and it must be remember-

ed that it was not all customers that wanted these fat lambs. As to buying and working fat rams, he must confess he had a great objection to these fat animals. He was fond of examining and admiring the different points of an animal, and in an anatomical point of view, it was impossible to say whether these points were good or symmetrical if the animal was fat. He believed that serious evils and losses accrued from persons not considering what they were about, when they gave great prices for fat rams. Rams might be compared to stallions, made fat for the purpose of disguise, and in order to deceive those who were not judges of the proper points of an animal. A flock-master should first consider what were the proper characters for sheep, and then select ewes having such characters, and endeavor to find rams to match; this was, in his opinion, far better than to make wide crosses.

New-York State Ag. Society.

From the report of the proceedings at the meeting of the Executive Committee, on the 9th of August, we give the following.

The Secretary reported, that he had been to Syracuse since the last meeting of the Board, and that in connexion with Col. Sherwood, Mr. Rust and Mr. Burnet, of the Executive Committee, the grounds were marked out, and the erections necessary for the show designated. The contractor, Col. Voorhies, with an efficient force was at work preparing the erections, and that every thing required for the Society would be in readiness previous to the time of meeting. The citizens of Syracuse were preparing for the reception of visitors, and every accommodation that the city could supply, both public and private, will be open for the entertainment of those in attendance at the show. The Horticultural Society of Syracuse are making arrangements for the suitable accommodation of the North American Pomological Convention.

The assurances received from all parts of our own country, as well as the Canadas, are such as to render it probable that the coming exhibition will be one of the most extensive ever held by the Society.

The Secretary also reported that he had called upon the Hon. HENRY CLAY, of Kentucky, (now at Saratoga Springs,) and presented to him an invitation on behalf of the Executive Committee, to attend the annual meeting at Syracuse. Mr. Clay expressed himself highly gratified at the invitation, and said, that it would give him the greatest pleasure to be present at the meeting and witness, as he had long desired to do, the improvements of the farmers of New-York, as well as to meet the farmers themselves. He feared, however, that he might not be able to enjoy that pleasure, as his arrangements were such as to render a return to Kentucky in the forepart of September necessary. He desired to have communicated to the Executive Committee and to the Society, his best regards for their polite invitation, and an assurance that should it be at all consistent with his engagements, he would avail himself of the opportunity to attend the show.

The Secretary reported that a letter had been received from Prof. Johnston, that he should sail from Liverpool in the steamer of the 28th July, land at Halifax, and spend a short time in New Brunswick, where he had an engagement; and would arrive here in time for our annual show, and would spend in this State and vicinity the month of September. (Prof. J. arrived in the America.)

The Secretary presented the *Transactions* for 1848, which have been received, and are ready for distribution.

A letter from G. Elfentrez, Director of the Imperial Botanic Garden, at St. Petersburg, Russia, acknowledging receipt of Transactions of the Society, with the

thanks of the Directors, and also that the publications of the Imperial Society would be duly transmitted in exchange.

E. & T. Fairbanks & Co., St. Johnsbury, Vt. A platform scale No. 10, and druggists scale for the Museum of the Society, of very superior finish and workmanship.

C. D. Mynderse, Seneca Falls, writes. We had a beautiful time for haying and harvesting. We have secured a larger crop of hay than usual this season. Wheat is more or less injured by the wheat fly, some late pieces very much, otherwise wheat bids fair to yield a heavy return. The long continued drought, which has continued about six weeks, with but one or two slight showers, I am fearful will prove ruinous to the corn and potato crops as well as clover.

Geo. Warren, Albany. Kendall's Thermometer, for Museum, &c.

Hon. Ashbury Dickens, Secretary U. S. Senate. Third report of the Smithsonian Institution, made to the Senate of the United States.

Fine sample of the "Clump Spring Wheat," from J. McD. McIntyre's farm near this city. The heads are short, but remarkably well filled, and the grain very large.

Mr. Wilbur of Auburn, fine samples of winter Barley, raised by him the present season.

Hon. Anson Miller, of Rockford, Northern Illinois, informs us in relation to the wheat crop, that the wheat has been greatly injured by the rust. The winter wheat, especially, it is thought, will be nearly if not entirely destroyed. The malady, as is always the case, prevails more generally on the low, rich, sandy loam soils. We have heard no general complaint of this kind as yet, from the Pekatonie country, which has a strong clayey subsoil, and where winter wheat always succeeds if anywhere.

From J. Hall Maxwell, Secretary Highland Agricultural Society of Scotland. Proceedings of the half yearly meeting of the society.

Edward Bullen, Esq., Secretary Royal Agricultural Improvement Society of Ireland, 1 vol. Quarterly Journal of the Society for 1849; Premium List and Regulations of the Society, for their Annual Cattle Show for 1849; and Reports of the Practical Instructors in Husbandry in different districts in Ireland.

Mr. B. writes:—"It is my painful duty also, to inform you that affairs look more gloomy in this country every day. The prostration of all classes is increasing, and no one can see the least signs of reaction or improvement. With a dense and pauper population of eight millions, circumscribed within the limits of an island not larger than some of your middle-sized States, you may easily conceive the effects arising from the sudden as well as repeated destruction of its staple article of food. The consequence is, that the people have sunk under the pressure, and are directing themselves in one vast tide of emigration, to the shores of your more favored country, and projects are now on foot for carrying out the system on a much more systematic and extensive scale, than ever before was contemplated. I am aware that this great influx of persons, many of them in distressed and burthensome circumstances, must be a great source of inconvenience to those localities in which they first land, previous to locating themselves in the more remote districts; but that is a slight penalty for you to pay, considering the privations which have afflicted the countries of the old world, and this unfortunate one in particular, these few years back. I trust, therefore, that my poor countrymen will be received by yours with consideration, and that adequate encouragement will be made for pushing them on into the centre of the country, where, instead of being burthens and outcasts in their native land as at present, they may be."

come a source of wealth and prosperity to the land of their adoption."

ALEXANDER WALSH.—This distinguished and ardent friend of Agriculture and Horticulture, died at his residence in Lansingburgh, on Saturday last, the 3d Aug., Mr. Walsh was one of the earliest members and promoters of this Society, and has ever been among its most efficient supporters. The Executive Committee, desirous of testifying their respect to one who for many years was an officer of the Society, and actively engaged in advancing its interests, have adopted the following preamble and resolutions:

Whereas intelligence has been received of the decease of Alexander Walsh, Esq., of Lansingburgh, one of the earliest friends and promoters of this Society, and for many years one of its officers, and ever an active and efficient friend of Agriculture: Therefore,

Resolved, That the Executive Committee have heard with deep regret of the decease of their respected friend, and that they deeply sympathise with the bereaved family in their affliction.

Resolved, That a copy of the above proceedings be enclosed to the family of the deceased, signed by the Secretary.

A draft of a memorial to the Legislature, on the subject of establishing an Agricultural College and Experimental Farm, was presented and adopted, and ordered printed for circulation.

The Executive Committee adjourned, to meet on Monday, the 10th of September, at 3 o'clock, P. M., at Rust's Hotel, Syracuse. B. P. JOHNSON, Sec'y.

Summer Fallows

EDS. CULTIVATOR—I have been a reader of the Cultivator for years. In that time I have read several pieces discarding summer fallowing for wheat. The writers must either labor under a mistake, or the practical operation of farmers in this vicinity, (than which there is no better for wheat,) are altogether wrong. I admit that favored fields—favored with the application of all the manure of the farm—may produce a tolerable crop of wheat succeeding summer cropping; but I very much doubt the propriety of the wheat-grower adopting this method extensively. There are numerous objections that might be urged against this practice—such as requiring double the number of laborers on the farm—the necessity of a large amount of work being performed in a given time—together with the difficulties attending the vicissitudes of the season. Should the fall prove to be very dry the plowing could not be well done, and then the uncertainty of a quick germination, and a firm root-hold in the earth, which is requisite to ensure a good crop.

The advantages of summer fallows are, the plowing and subsequent cultivation of the land can be performed at leisure after the bustle and hurry of the spring work is over, which affords sufficient opportunity to extirpate that pest of the farmer the Canada thistle, which threatens, and unless checked, will obtain exclusive sway. By judicious cultivation, the fallow retains sufficient moisture when the season of sowing arrives, to produce a quick germination, and advance the future fall growth of the young plant.

I have had some experience in raising wheat by both methods, and the conclusion to which I have arrived is, that raising wheat after summer cropping, under favorable circumstances, and with favorable seasons, does very well; but the great and chief dependance of the farmer is from his fallows.

I venture the assertion that summer fallowing is essential to the successful cultivation of wheat, and when I say this, I think I am sustained in the position by three-fourths of the practical wheat-growers of the

land. If any are of a contrary opinion I should be glad to hear from them. W. ANSLEY. *Rushville, Yates Co., N. Y.*

Farm Horses.

EDS. CULTIVATOR—Having read with much interest various communications in "The Cultivator," respecting some of our most noted breeds of horses, I offer a brief description of a useful, and in this region very popular stock of agricultural and draught horses, which have sprung from a horse called Samson, imported by me from the south of England, in 1837. As some of them will probably be shown at our next State Fair at Syracuse, I thought a few lines by way of introduction might be useful.

Samson was selected from some of the best stock of farm horses in the county of Sussex, England, for the express purpose of giving more bone, muscle, and constitution, to the agricultural horses of America. How far he succeeded, his stock will show. They mostly inherit, in a great degree, the shape and disposition of the sire; but being bred from smaller mares, they do not equal him in size, though they are large enough for all ordinary purposes; being remarkably "compact," strong, and hardy, kind and true in harness, with as much spirit and action as is useful and pleasant in a work horse.

Old Samson was a perfect horse of his kind, of immense muscular power, 16 hands high, and weighed 1660 pounds. He died in the fall of 1845.

The young ones vary from 14 to 16 hands, and weigh from 1200 to 1500 pounds. They may be found from central New-York through the western counties, some in Michigan, Wisconsin and Illinois. Where best known they out-sell any other stock of horses for hard service. Several have been kept as Stallions, and are generally well patronised. Among others in this county, is one owned by Nottingham & Allen, of Palmyra, one by Wm. Swales, of Sodus, another by Z. Lane, of Lyons. In Ontario county, Rushmore, Brown and Bowers, have each one. In Monroe county, Jones and Reeves, one each. Heston's of Genesee county, Sybrant's of Niagara county, and others, would all pass as good horses in any farming district, and are particularly adapted to cross with the light-boned, high-blood stock of the Southern and Western States. JOHN ROBINSON. *Palmyra, Wayne Co., August, 1849.*

Show of the Royal Agricultural Society.

The tenth show of this society took place at Norwich, in July last. The display of live stock was above that of an average of the Society's exhibitions, and that of implements considerably greater. The number of entries for stock was 624, and for implements 1880. The *Mark-Lane Express* remarks:

"As regards the exhibition of stock, taking it as a whole, we have difficulty in bringing ourselves to the conclusion that it reaches an average in point of quality. There were some animals of a very high order or merit, such as Mr. Booth's two short-horn cows, and Mr. Wilson's yearling heifer, an almost perfect animal. Mr. Quartly's Devon bull could scarcely be surpassed. The Hereford and Devon classes were more evenly good than the short-horns. The yearling classes of all were very promising. The show of Southdown sheep far exceeded that of former years; Mr. Jonas Webb was eminently successful, and deservedly so, having won the first and second prizes for shearling rams. It is said that the judges selected six rams out of the whole number exhibited, as being far superior to any others, and that they had some difficulty in deciding to which of these splendid animals the prizes should be awarded. It turned out afterwards, that the whole six

were Mr. Jonas Webb's! Mr. Fisher Hobbs, who appeared for the first time as a Southdown breeder, took the first prize for rams of any age. The show of pigs was not so varied as usual. It will be seen, however, that Mr. Hobbs improved Essex maintained their character, carrying off first prizes in two classes. Mr. Hobbs was very successful, carrying off more prizes than any other single individual. The implements were most numerous and varied, manifesting a continuous improvement in the manufacture."

State Fair.

There is every appearance that the approaching State Fair at Syracuse, will be fully attended, not only by our own farmers and citizens generally, but by numbers from the neighboring states and from the Canadas. It will have been seen by the doings of the Executive Committee, published in this number and in our last, that the most ample arrangements have been made for the exhibition. The particulars in regard to the premises, &c., can be learned from the printed catalogue of the society, to be had on application to the Secretary, B. P. Johnson, Esq., or they can be obtained at the business office of the society at Syracuse, after the first of September. The following regulations of the society should be observed:

The Executive Committee will meet on the show-ground on Tuesday the 11th at 12 o'clock, and the judges are requested to be present, as the vacancies will then be filled. This day (11th) will be devoted to examinations by the judges; and the grounds will not be opened, except to officers, guests, delegates, members, judges, and exhibitors. On Wednesday, 12th, the grounds will be open to the public, and continue open for two days.

The Annual Address by Prof. J. F. W. JOHNSTON, of Durham, England, will be delivered on Thursday, 13th, at 3 o'clock P. M., on the show-ground.

Tickets will be furnished by the rail-road companies at half the usual rates, enabling visitors to return any time during the week of the show, and animals and articles for exhibition will be transported free, as heretofore.

Exhibitors of stock should give at least one week's notice of their intention to send stock, to the person at the station from which the stock is to be sent, viz: to E. Foster, Jr., rail-road office, Albany; L. R. Sargeant, Supt. Troy and Whitehall roads; G. W. Young, Supt. Schenectady; T. M. Francis, rail-road office, Utica; W. D. Stevens, Oswego; J. B. Dill, Auburn; John Fargo, Geneva; Joseph Alleyn, Rochester; M. Beach, Batavia; Wm. Wallace, Supt. Attica and Buffalo rail-road; P. N. Rust and J. B. Burnet, Syracuse.

Articles designed for exhibition should be carefully labelled with the owners' name and residence, and may be directed either to P. N. Rust, J. B. Burnet, Roger Billings, or B. F. Colvin, Syracuse.

Entries may be made at the office of the secretary at Rust's Hotel, Syracuse, and fees of membership paid after the first of September. On Monday the 10th of September, the business office will be opened on the show-grounds, and all entries must then be made there.

SALES OF STOCK will take place on Thursday the 13th. It is expected that there will be offered for sale, Short Horn cattle from the herd of Col. J. M. Sherwood and others; Herefords from Messrs. Bingham, of Vermont; Devons from Mr. Washbon, of Otsego county, and Mr. Blakeslee, of Connecticut; sheep from Messrs. Bingham, Blakeslee, Sherwood, and others; horses from Mr. Burnet and Mr. Thompson, of Syracuse, Mr. Blodgett and others, of Vermont. For particulars in regard to the stock offered by Messrs. Bingham, Blakeslee, and Blodgett, see their respective adver-

tisements in this, and the last number of *The Cultivator*. There will be other stock, especially horses, from out of the state, which will be offered either for sale or exhibition. Mr. Wier, of Walpole, N. H., will be on the ground with the old Gifford Morgan Stallion. Mr. L. D. Harlow, of Hartland, Vt., will also be present with the Morgan horse Grey-Hawk.

We are authorised to state that articles, or stock intended for exhibition from Canada, will be admitted by way of Oswego free of duty.

The North American Pomological Convention will open its session on Friday morning, September 14th, at Rust's Hotel.

Prize Sheep.

EDS. *CULTIVATOR*—I noticed, lately, a communication on the subject of Cotswold sheep, from a gentleman in Virginia, in which he says he imports sheep from England "every two years, and sometimes every year," when he "can get sheep that have taken the Queen's or Royal prizes." That, he considers the "severest ordeal for sheep to go through." His orders, he says, "are not limited in price," as he is "determined to import none but the best," and as the "cost and risk are great," he "requires the Queen's prize sheep only."

Will this gentleman be so good as to inform the public what this "Queen's prize" is? By what association, or authority is it offered? J. P. R. *Montreal, C. E., August, 1849.*

Crops in Virginia.

The wheat harvest is ended; and with us, as well as other portions of the state which I have heard from, more than an average yield in quantity and quality may be expected—although it was much later than usual; increasing the chances thereby, in favor of its taking the rust, to which our late wheat is much subject.

The growing crop, and vegetation generally, owing to the cool and dry weather during the spring, is some two weeks later than common Indian corn is, the great favorite with our Virginia farmers and planters, and the tenacity with which they adhere to their opinions concerning it, and the exertion brought into requisition in cultivating it on their worn out lands, would lead any one to infer that it was rather an improver than an exhauster of soil. The present crop looks promising—though late; as the season has been quite unfavorable for it, having had great extremes of weather the whole season; and interrupted also by the clover worm, (supposed to be) an insect which preys upon the roots of the corn. The oat crop will not be an average one, and so in regard to the hay crop, though having had fine seasons lately, the second mowing may be better. J. A. *Long Hill, Amherst county, Va., July 20th,*

THE WAYNE COUNTY, PA., AGRICULTURAL SOCIETY will hold its annual show at Honesdale, Oct. 7. P. BUSHNELL, Esq., will please accept our thanks for the list of premiums, &c.

HESSIAN FLY AND GOOD WHEAT.—J. OGLESBY, in the *Pennsylvania Cultivator*, states that he had a nine acre lot, from which he obtained 60 bushels of oats, the rest of the crop being briars, sumac, sassefras, Canada thistles, poke, elder, and nearly all other kinds of weeds. When the oats were harvested, the bushes were grubbed, and the weeds cut with a scythe. When perfectly dry, they were burned in a strong wind, as they lay over the ground. The nine acres then received 700 bushels of lime—the land was well plowed—and the next year it yielded 390 bushels of good wheat, untouched by the Hessian Fly, the fire having destroyed them.

Domestic Economy, Recipes, &c.

CURRENT WINE.—A palatable and wholesome wine—or at least useful “as a medicine,” in many cases—may be made from the currant. We have, in former years, made wine from the red currant by the following recipe, which was considered of so fine a quality as to be ordered by the physicians for their patients, in preference to the imported kinds. Its cost was not over fifty cents per gallon. Though rather late in the season, we publish the recipe at the request of several correspondents.

To each gallon of clear juice was added two gallons of water, and to each gallon of the mixture was added three and a-half pounds of good brown sugar. After the sugar was dissolved, the liquor was put into good barrels, placed in the cellar; and when the fermentation had subsided, it was bunged tightly. In February, one gallon of the best fourth-proof brandy was added to the barrel. In May following, it was bottled. Like other wines, it improves with age.

White wine may be made with white currants, using the same proportion of white sugar as is named of brown, for the above—the liquor to be treated in the same way except that no brandy is added.

The following recipes are from Mrs. Rundell’s “*Domestic Cookery*.” Elder wine is considered an excellent remedy in influenza, sore throat, &c.; and black currant wine highly useful in “summer complaints,” dysentery, &c.

ELDER WINE.—To every quart of berries put two quarts of water, boil half an hour, run the liquor and break the fruit through a hair sieve; then to every quart of juice put three-quarters of a pound of Lisbon sugar, coarse, but not the very coarsest. Boil the whole a quarter of an hour, with some Jamaica peppers, ginger, and a few cloves. Pour it into a tub, and when of a proper warmth, into the barrel, with toast and yeast to work, which there is more difficulty to make it to do than most other liquors. When it ceases to hiss, put a quart of brandy to eight gallons, and stop up. Bottle in the spring or at Christmas. The liquor must be in a warm place to make it work.

BLACK CURRANT WINE.—To every three quarts of juice, put the same of water unboiled; and to every three quarts of the liquor, add three pounds of very pure moist sugar. Put it into a cask, reserving a little for filling up. Put the cask in a warm dry room, and the liquor will ferment of itself. Skim off the refuse, when the fermentation shall be over, and fill up with the reserved liquor. When it has ceased working, pour three quarts of brandy to forty quarts of wine. Bung it close for nine months, then bottle it, and drain the thick part through a jelly-bag until it be clear, and bottle that. Keep it ten or twelve months.

To REMOVE MARKS FROM A TABLE.—If a whitish mark is left on a table, by carelessly setting on a pitcher of boiling water, or a hot dish, pour some lamp oil on the spot, and rub it hard with a soft cloth. Then pour on a little spirits of wine or Cologne water, and rub it dry with another cloth.—The white mark will thus disappear and look as well as ever.

DRYED APPLES.—Some varieties being much more tender in their texture than others, dissimilar kinds should be kept separate, to prevent one portion stewing too much, while another remains hard.

DRIED PEACHES.—The following is said to be an excellent mode of drying peaches and plums. The fruit is first skinned by being placed a short time in a strong

alkaline solution, (ley, or solution of potash,) the stones are then removed, and they are dried in a slow oven.

PRESERVING APPLES.—It is asserted that plaster or gypsum, from its soft texture, and the compact, airtight bed which it forms, is one of the best substances to envelope fruit for preserving. The saw-dust of the maple, which imparts no bad flavor, after being thoroughly dried by fire heat, has been found excellent for imbedding rare fruit, when kept in a dry cool place.

MAKING VINEGAR.—Nearly every one knows that in the conversion of cider to vinegar, exposure to the air is essential. The more thorough this exposure, the more rapid will be the formation of the vinegar. The *Ohio Cultivator* says, “we have seen this effectually done by causing it to run slowly from a barrel placed up stairs, through an aperture in the floor and ceiling, on a loose pile of fine sticks or shavings below, through which the air could pass freely, then draining into a cask into the cellar.”

VINEGAR FROM BEETS.—It is stated that the juice of one bushel of sugar beets, will make from five to six gallons of vinegar, by washing, grating, expressing, and exposing, two weeks to the air in the barrel, with a ganzo-covered bung hole.

To PREPARE RENNET.—Take a gallon of blood-warm water to each rennet; soak, after stirring, for 24 hours; strain the liquor and let it settle, saturate with salt, and skim off any scum.

Answers to Correspondents.

CHERRY FOR A NAME.—L. W., Middleburgh, Schoharie county, N. Y. The cherry sent appears to belong to the family of mazzards. You say it was a “sprout” from a tree brought from England by Sir William Johnson. If that tree was budded, it is probable the stock was a mazzard—as it is common to bud on such stocks—and hence your tree, being taken from the root, would produce the same kind as that stock, and not the kind which was budded on it.

BLACK EARTH.—Z. S. C., Westhampton, Mass. If the black earth of which you speak, contains considerable vegetable matter, or partakes of the character of peat, it will pay the cost to make it into a compost with animal manure. Try plaster on your land, at the rate of a bushel or two bushels per acre.

WHITE THORN FROM SEED.—J. C., Brandon, Vt. We are not acquainted with any better way of raising this plant from seed, than to gather the haws in the fall when they are fully ripe, and plant them about two inches deep in any good loamy soil. All kinds of thorns are slow in germinating, and the plants do not all show themselves till the second summer after they are planted. If any of our friends know a better process than that mentioned, we would thank them to make it public.

SPAYING HEIFERS.—A Young Farmer, Roswell, Ga. You will find full directions in regard to this operation in our August number.

BONE DUST.—J. R. S., Clarksville, Ga. Bones are ground in mills prepared for the purpose. They are ground to various degrees of fineness, as is desired.

CHINESE GEESE.—J. F. S., Weldon, North Carolina. Very fine geese of this kind can be had of Messrs. H. & A. Mesier, of Wappingers Creek, Dutchess county, N. Y., at \$5 per pair. We do not know any reason why they would not do as well in your section as here. They are a very handsome and prolific kind, breeding twice and sometimes three times in a season.

Notes for the Month.

COMMUNICATIONS have been received since our last, from *Agricola*, F. Holbrook, Lewis Sanders, *Observer*, Sydney Sinclair, John Robinson, L. Durand, *A Gleaner of Agricultural Knowledge*, Dean, S. W., John Conant, *A Young Farmer*, *An Observer*, A. S. Copeman, A. Stevens.

ACKNOWLEDGMENTS.—“History of Chemical Investigation of Maize, or Indian Corn,” by J. H. SALISBURY—a *prize essay* of the New-York State Agricultural Society—from the author. The “Edinburgh Evening Courant,” containing a notice of the doings of the Highland and Agricultural Society of Scotland, at its last half-yearly meeting—from an unknown friend. Transactions of the New-York State Agricultural Society for 1848, from B. P. JOHNSON, Esq., and C. VAN BENTHUYSEN, Esq.

ARRIVAL OF PROF. JOHNSTON.—This gentleman arrived at Halifax, N. S., about the 10th of August. He is expected in Albany about the first of September, and will proceed to Syracuse in time for the delivery of the address at the State Fair.

SCHOOL OF APPLIED CHEMISTRY.—We would call particular attention to the advertisement of this school, which will be found in our present number. The institution is under the direction of Professors SILLIMAN and NORTON—the latter having special charge of the agricultural department. Prof. NORTON’s writings on agricultural subjects are very extensively known, and are highly approved by our best practical farmers. The school has had many young farmers, as students, at former terms, and we have heard from them repeated expressions of gratification, in relation to the advantages of the instruction they had there received. It should be remembered that pupils can enter this school for a single term, or for several terms, just as they choose,—the school being open to all, whether students of the college or not.

DEVON CATTLE.—In the article on Devon cattle, published in our April number, (current volume) we mentioned some of the breeders of this stock in this country. The name of Mr. E. P. BECK, of Sheldon, Wyoming county, N. Y., should have been included. He has been many years engaged in breeding this kind of stock, and has shown some of the best animals we have ever seen of the breed. The two fine Devon bulls which received the first and second premiums at the State Fair at Buffalo, were of his breeding. We spoke particularly of these animals in our notes on the show, published in the October number, last year. There are other breeders of Devon’s whose stock deserves notice, but for which we have not room at present. Mr. COWLES, of Farmington, Ct., it will be seen by his advertisement, offers for sale several of his fine herd.

By Mr. BEMENT’s advertisement, it will be seen that he is engaged in the preparation of various articles useful in household economy. We have tried his table salt, his ground rice, wheat grits, &c., and find them all first rate in their kind. His establishment is well worthy examination.

EARLY ORLEANS PLUM.—We are indebted to Mr. KIRTLAND, of the Cantonment Farm, Greenbush, for handsome samples of this fine early variety of plum. They were ripe the first week in August.

ERRATUM.—In the article on Wood’s Plow, in our July number, a typographical error escaped our notice till too late to rectify it, in which the cost of patterns was made incorrectly to read \$15,000 instead of \$1,500.

DEATH OF FRIENDS OF AGRICULTURE.—Since our last number went to press, we have received intelligence of the demise of several individuals prominent among the promoters of agricultural improvement, and who will long be missed in the circles in which they moved. Among these, we have before us the names of ELIAS PHINNEY, Esq., of Lexington, Mass.; Hon. THEODORE LYMAN, of Boston; ALEXANDER WALSH, Esq., of Lansingburgh; Hon. E. MACK, of Ithaca; Dr. H. GATES, of St. Louis, Mo.

Our readers will find an interesting sketch of Mr. PHINNEY, written by our able correspondent, Mr. HOLBROOK, in this number.

Mr. LYMAN was an ardent and efficient friend of agriculture and horticulture. He liberally endowed the “Farm School for Boys,” at Westboro’, Mass., and gave the sum of \$10,000 to the Massachusetts Horticultural Society, besides making other munificent donations for similar purposes.

Mr. WALSH was one of the early supporters of the New York State Agricultural Society; was for several years a constant attendant at its meetings, and rendered valuable services in advancing its interests. The resolutions passed by the Executive Board in reference to his death, will be found on another page.

Mr. MACK was warmly devoted to the advancement of agriculture, in which he had for several years been practically engaged.

Dr. GATES was formerly editor of the *Iowa Farmers’ Advocate*, and since the discontinuance of that paper, was senior editor of the *Valley Farmer*, published at St. Louis. He was an able writer, and in his death, the agricultural press has sustained a loss.

Since the above was in type, we have heard, with deep regret, of the death of Col. EDMUND KIRBY, of Brownsville, Jefferson county, N. Y. He died at Avon Springs, on the 20th of August. He had been attached to the army since 1812, and for many years had served in the capacity of Pay-Master. He was a volunteer aid of Gen. TAYLOR, in the late war with Mexico. But though a soldier by profession, he was ardently devoted to the improvement of agriculture, and the development of all the resources of his state and country. He had been an active officer of the New-York State Agricultural Society, and at the time of his death, was one of the Commissioners appointed for preparing a plan for an Agricultural School.

TRANSACTIONS OF THE NEW-YORK STATE AGRICULTURAL SOCIETY FOR 1848.—This volume contains an unusual amount of valuable information. It is considerably larger than any previously issued by the society, and comprises 975 pages. The principal increase of matter is in the form of essays and elaborate papers on various important subjects. Of this class we may mention the highly valuable essay on the “Analysis of Indian Corn,” by Mr. J. H. SALISBURY, and the first portion of the “Survey of Washington County,” by Dr. FITCH. These two papers form 400 pages of the volume. There are many other valuable articles in the work, from some of which we have already given copious extracts. We copy in this number, as will be seen, the statement of Mr. FOSTER in regard to his farm, which received the first premium of the society for last year. In future numbers we shall have occasion to make further drafts on the volume, more especially in reference to the essay on Indian corn, which contains many useful facts not brought out by any previous investigation. We are indebted to Mr. JOHNSON, the Secretary of the Society, and also to Mr. C. VAN BENTHUYSEN, for copies of the work.

THE ALBANY AND RENSSELAER HORTICULTURAL SOCIETY will hold its next exhibition at the Rooms of the New York State Agricultural Society, Albany, September 19th and 20th.

THE COTTON CROP.—M. W. PHILIPS, Esq., of Edwards, Miss., writes under date of July 29th last, that the cotton crop will be considerably deficient; that there had been a month of almost constant rain, and crops were injured in consequence. The corn crop, however, was expected to be good.

TRANSMUTATION.—The editor of the *Michigan Farmer* occupies five pages in two numbers of that paper, in advocacy of the hypothesis that wheat changes to chess. We have carefully read his remarks, but find no evidence or argument with which the public are not generally familiar—his main points having been fully discussed in the *Genesee Farmer*, sixteen years ago. He informs us, however, that he has “scarcely yet entered upon the investigation of the subject.” We know not, therefore, what is in reserve, but if anything of importance appears, will give our readers due notice. In the mean time we will inform the editor of the *M. F.*, that “the \$100 premium,” about which he inquired, *will be paid* whenever it is demonstrated that wheat turns to chess, or that both naturally grow from the same germ, or on the same stalk.

GOOSEBERRIES.—We are indebted to Mr. JAMES WILSON, of this city, for fine specimens of the “Crown Bob” and “Roaring Lion” varieties of gooseberries.

DOYENNE D'ETE PEAR.—We have received a handsome sample of this pear from Dr. HERMAN WENDELL, of this city. It is of good size, and has a beautiful mahogany color; with a flavor unsurpassed by any pear we have seen which ripens so early in the season—first week in August.

WOOL.—An exchange paper states that the White River (Vt.) Wool Depot has received over sixty thousand pounds of wool this season.

WOOL-GROWING IN ILLINOIS.—According to the *Peoria Register*, there are 30,000 sheep in Illinois, yielding as an estimate, the present year, 90,000 pounds of wool. Bishop Chase, it is said, has a flock of 2,000; C. Stone a flock of the same size, and several others have flocks of 1,000 to 1,500, each.

Prices of Agricultural Products.

New-York, August 24, 1849.

FLOUR—Genesee, per bbl., \$5.62½a\$5.76—Michigan, \$5 50a \$5.56.

GRAIN—Wheat, Genesee, per bush., \$1.25a\$1.30—New South-ern, \$1.05a\$1.25—Corn, Northern 63a64c.—Rye, 63a64c. Oats, 38a40c.

BUTTER—best, per lb., wholesale, 19a21c.—western dairy, 12½a14c.

CHEESE—per lb., 6a7c.

BEEF—Mess, per bbl., \$13.50a\$14.

PORK—Mess, per bbl., \$10.75—Prime, \$9.

LARD—per lb., 8a8½c.

HAMS—Smoked, per lb., 11e.

HOPS—per lb., first sort, 6a8c.

COTTON—Upland and Florida, per lb., 9a11½c.—New Orleans and Alabama, 9½a12½c.

WOOL—(Boston prices)

Prime or Saxon fleeces, per lb.,	42a46c.
American full blood Merino,	36a40c.
“ half blood do,	32a35c.
“ one-fourth blood and common,	29a31c.

REMARKS.—The cotton market is rather heavy, though prices have as yet been fully maintained. For flour and meal the demand is rather moderate. In provisions the trade is fair. The wool market is firm at advanced prices.

Selling Off.

LINNAEAN BOTANIC GARDEN & NURSERY, late of WM. PRINCE, deceased, Flushing, L. I., near New York. WINTER & CO., Proprietors. In consequence of the decease of the Junior, and of the advanced age of the surviving Partner, the entire stock of this establishment, comprising every description including the newest and choicest varieties of

FRUIT AND ORNAMENTAL TREES,

Shrubs, vines, Plants, Roses, &c., will be disposed of at very reduced prices, in order to close the business as speedily as possible.

Orders accompanied with the cash, to the amount of \$10, or upwards, will be supplied at a reduction of 25 per cent. from the usual prices.

Nurserymen, Venders, and others, wishing to purchase by wholesale, will be supplied at such reduced prices according to kind and quantity, as will probably prove satisfactory to them.

Descriptive Catalogues gratis on application, post paid.

Sept. 1, 1849.—21.

Mount Hope Garden and Nurseries.

Rochester, New-York.

THE proprietors invite the attention of *Fruit Growers, Nurserymen, and Dealers in Trees*, to their present stock now offered for sale.

By recent large importations, and an extensive scale of propagation, they have obtained a stock of nursery articles as complete as any in the country, and offer them now on the most liberal conditions.

The well known health, vigor and hardiness of the trees raised here, and the undivided and scrupulous attention given to every department by the proprietors in person, offer great inducements to purchasers.

Standard Fruit Trees.

Consisting of all the best varieties of Apple, Pear, Peach, Plum, Cherry, &c., of suitable size and age for orchard planting. The principal stock is made up of the well known leading sorts, but nearly all the new and rare American and Foreign varieties are on hand and can be furnished.

Pyramidal and Dwarf Trees,

Consisting of select varieties of Pears on Quince, Apples on Paradise, and Cherries on St. Lucie, or Mahaleb stocks, for gardens and limited grounds, and for nurserymen and others who desire to obtain fruit or test varieties quickly. Having given much special attention to this branch for many years, the stock of trees of this character, is probably the largest and best in the country.

Gooseberries, Raspberries, Currants, &c.

Of these, we have a large and complete assortment, and can supply them by the dozen, hundred or thousand, at low rates. The largest and finest English Gooseberries, cultivated and imported annually. All the new Currants can be supplied.

Ornamental Trees, Shrubs, Roses, &c.

Of these we can supply all the leading articles, such as Horse-chestnuts, Mountain Ash, Alantus, Snowy Abele, Silver Maple, &c. by the 100 or 1000 much below ordinary rates. Besides all the popular shrubs and roses, and a large number of new and rare ones, recently imported.

Hedge Plants.

Buck Thorn, 2 and 3 years old,

Honey Locust, “ “ “

Osage Orange, 1 and 2 years old,

Privet and other Shrubs.

Evergreens.

Red Cedar, Norway Spruce, Hemlock, Arbor Vitæ, &c., suitable for hedges, can be furnished to any extent.

Stocks and Young Worked Trees.

Pear Seedlings, 1 and 2 years, transplanted,

Plum do 2 years,

Paradise stocks, for dwarf apples—fit for working,

Mazzard Cherry, “ do 1 yr. old, do do

St. Lucie or Mahaleb stocks, for dwarf cherries, do

Quince stocks, sort commonly used for pears, do

New Upright Quince.

A remarkably free, erect grower—the best of all for Pear stocks. We can now supply these in moderate quantities.

Young Worked Fruit Trees

For distant transportation, can be furnished to any extent, at very moderate prices.

Wholesale priced lists and general Catalogues sent gratis to all post-paid applications.

ELLWANGER & BARRY.

Rochester, Sept. 1, 1849.—1t.

Fruit Trees.

THE subscribers offer for sale this fall their usual assortment, viz: Apples, Plums, Pears, Cherries, Peaches, and Ornamental Trees.

The following Pears on the QUINCE.

Louise Bonne de Jersey,

Bartlett,

Virgalieu, (White and Gray,) Onondago, or Swan's Orange,

Duchesse d' Angouleme,

New Gray Winter Beurre,

Doyenne d' Ete, or Summer Virgalieu,

Columbia,

Bloodgood,

Vicear of Winkfield,

Beurre Diel,

Dearborn's Seedling,

Leon Le Clere.

Also, a few hundreds of the European Mountain Ash, of an extra size.

WILSON, THORBURN & TELLER,

Nurserymen.

Fine Devon Cattle for Sale.

THE subscriber offers for sale a portion of his herd of pure Devon Cattle, as follows:—2 cows thorough bred, 7 and 8 years old, bred from stock imported by Richard Caton, of Baltimore, now in calf by my bull, *Young Eclipse*; sired by Mr. Patterson's imported bull *Eclipse*. Also, 2 or 3 heifers, 1 and 2 years old, and 5 bull calves, from 4 to 8 months old. All bred from choice stock.

WM. L. COWLES.

Farmington, Ct. Sept. 1, 1849.—1t.

Nurserymen's Agency,
145 Maiden Lane, New-York.

THE subscriber offers for sale,
40,000 Pear Stocks,
35,000 Quince do
50,000 Apple do
15,000 Plum do
20,000 Cherry do

Peruvian and Prepared Guano, Chemical manures, Bone dust, &c., all of the best quality, put up in packages of any size, as ordered.

Russia Mats,
Propagating Glasses—all sizes,
Flower pots, at manufacturer's prices.

My services are at command, for the purchase and sale of all descriptions of Nursery stock, and for receiving and forwarding goods, &c. &c.
GEO. G. SHEPPARD,
New-York, Sept. 1, 1849.—1t. Horticultural Agency.

To Nurserymen, Orchardists and Gardeners.

THE subscriber offers for sale at his nurseries, at Plymouth Mass., Pear, Quince, Cherry, Plum, Apple, Paradise and Mahaleb stocks, suitable for grafting in the Spring, and for budding the coming season. Mountain Ash, Elm, Spanish Chestnut, Ash, Maple, Lime, Alder, Larch, Scotch fir, Silver fir, Norway fir, Arbor Vitæ, Balsam fir, from 1 to 4 feet; Cedar of Lebanon, Araucaria imbricata, Deodar cedar, Oaks, Althæas, Hawthorns, Lilacs, Spiræas, Syringas, Deutzias, Acacias, Roses, Honeysuckles, Climbers &c. Raspberries, May's Victoria and other currants, Gooseberries, Native grapes, Foreign grapes in lots for vineyards. Myatt's Victoria, Early Scarlet, and other rhubarbs. The best native and foreign Pears, 1 to 5 years from the bud, fine thrifty trees and well grown. 40 Select named Verbenas, all of Beck's Pelargoniums, in 23 varieties, including those of last season, being the finest Pelargoniums ever introduced.

Priced Catalogue sent on application.

Sept. 1, 1849.—3t.

B. M. WATSON.

Nursery of J. J. Thomas,

Macedon, Wayne Co., N. Y.

THIS nursery now contains many thousand fine trees, of large, handsome and thrifty growth, consisting of Apples, Pears, Cherries, Peaches, Apricots, &c., and the smaller fruits, of the best standard sorts, and most of the finest new varieties; ~~in all cases they have been propagated for sale after being thoroughly proved in bearing~~.

The collection of APPLES, consisting of many thousand large trees, mostly 7 to 9 feet high, embraces the finest standard varieties, and nearly all the valuable new sorts.

Very fine pear seedlings, at \$12 per 1000, two year old apple seedlings, at \$5 per 1000, Horse chestnuts 1 to 2 ft high at \$5 per 100, &c. &c.

When purchasers desire, selections of the best for affording a regular succession of fruit throughout the season, will be made by the proprietor.

A carefully assorted collection of hardy ornamental trees, shrubs, and herbaceous perennial plants, will be furnished at very moderate prices.

Trees for canal and railroad conveyance, will be well packed in bundles, enclosed in strong mats, with the roots muddled and encased in wet moss, so as perfectly to preclude all danger of injury.

All communications, post-paid, to be directed Macedon, Wayne Co., N. Y.

Sept. 1.—2t.

Strawberry Plants.

THE subscriber offers to Nurserymen and others, requiring large quantities of Strawberry Plants, the following varieties. To those who buy to sell again, a discount will be made of 33 per cent.

Hovey's Seedlings, per thousand,	\$10 00
Crimson Cone, do	10 00
Early Scarlet, do	10 00
Boston Pine, do	10 00
Burr's New Pine, per hundred,	4 00

Plants will be ready for delivery by the middle of September. Flushing, L. I., Sept. 1.—1t. G. W. HUNTSMAN.

Hamilton Nursery.

THE proprietor of this establishment confines himself wholly to the propagation of hardy Fruit Trees, all of which have been obtained from the most reliable sources, or cut from bearing trees of well known varieties. About sixty varieties of plums and a large quantity of the Apples have been proved on his own grounds, and all are cultivated with his own hands, assisted by his son, who is soon to assume a personal interest in the business. And all the cutting of buds or grafts, and the labeling of trees, with the oversight of taking up and packing, being done by him in person, he feels confident of being able to give as good satisfaction as to correctness, as can be given at any other nursery. The stock of apples is large, and embraces numerous varieties, so that the Fruit Grower and Amateur Horticulturist can each be supplied.

A liberal discount to nurserymen and dealers in trees.

Seedling stocks of Apples and Plums for sale.

AGENTS.—Geo. G. Sheppard, 145 Maiden Lane, New-York, H. L. Stephens, Honesdale Pa., Wm. J. Hamilton, Ringwood, McHenry Co., Ill.

Catalogue sent gratis to all post paid applicants.
Canterbury, Orange Co., N. Y. CHARLES HAMILTON.
Sept. 1.—2t.

JUST PUBLISHED,

BY DERBY, MILLER & CO., AUBURN,
THE AMERICAN FRUIT CULTURIST,
BY J. J. THOMAS.

A GREATLY enlarged and improved edition of the *Fruit Culturist*, containing more than triple the matter of the former editions, having been wholly re-written, so as to embrace essentially

ALL THE VALUABLE INFORMATION

Known at the present time, relative to

FRUITS AND FRUIT CULTURE.

It will contain

THREE HUNDRED ACCURATE ENGRAVINGS,

And will include condensed and full descriptions of all fruits of merit or celebrity cultivated or known in the country.

To prevent confusion in a numerous list of varieties, careful attention has for years been given to effect the clear and systematic arrangement adopted in this work; and further to enable the reader to know at a glance, the various grades of excellence, the quality is designated by the size of the type used for the name.

The numerous figures of fruits are

EXACT IMPRESSIONS

Of average specimens. The descriptions have been prepared in nearly every case, from the fruits themselves; and to distinguish fixed from accidental characters, careful comparison has been extensively made with specimens from several different states, and with the descriptions in the best American works on Fruits.

To determine the qualities as adapted to different regions, assistance has been largely furnished by a number of the most eminent pomologists of the Union.

The whole making a handsome duodecimo volume, of over 400 pages, at the low price of One Dollar.

DERBY, MILLER & CO.

Auburn, Sept. 1, 1849.—1t.

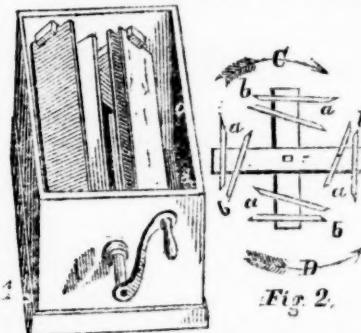
John Mayher & Co.

United States Agricultural Warehouse, 195 Front, one door south of Fulton Street, New-York City,

WHERE they have for sale over 200 different patterns and sizes of Plows, of the most approved kinds, and suitable for all kinds of soil, together with the most extensive assortment of Agricultural Implements ever offered for sale in the city of New York, which will be sold at lower prices than they can be obtained at any other establishment. Purchasers will do well to call and examine their stock before purchasing elsewhere. Among the plows advertised will be found J. Mayher & Co.'s celebrated and unequalled First Premium Eagle D. Plow, without doubt the best and cheapest plow to be had in the United States.

N. B. Castings of all kinds made to order.
New-York, Sept. 1, 1849.—1t.

Centrifugal and Centripetal Churn.



AMONG the numerous inventions, &c. of the Churn, the annexed cut represents the only one which has thus far deserved an introduction. It is a recent invention, and for which letters patent have been granted. It is made and offered the public on trial, with our best assurances of its giving satisfaction.

DESCRIPTION.—Fig. 1. The churn as it appears with the cover off. Fig. 2. The head of the dasher or floats which is in one piece and can be instantly removed from the churn—and has no iron rod running through, as in most crank and cylinder churning.

When the crank is turned in the direction of the arrow, C. the cream is forced through between the three flat broad floats, passing in at a. and escaping at b. This process is continued until the butter forms into lumps so large as not to pass through, when the crank is reversed, thereby throwing all the milk, cream and butter into the middle of the churn—caused by the angular pitch of the inner float, thereby quickly gathering the whole mass into one roll of butter.

From the repeated trials had with it, and the uniform success attending its use, we do not hesitate to recommend it as being well worthy attention and trial.

Sizes and prices will be published in a succeeding No.—They will not exceed that of the common cylinder churn.

Albany Agricultural Warehouse,
369 & 371 Broadway, Albany.

Sept. 1. H. L. EMERY.

A Small Farm Wanted.

A Letter addressed to C. S., Newport, N. Y., will receive attention.

August 1.—2t. *

Syracuse Nurseries.

Thorpe, Smith & Hanchett, Proprietors, Syracuse, N. Y.

FIFTY acres of the fertile soil of Onondaga Co. are occupied by the proprietors of these nurseries in the cultivation of fruit trees alone, embracing almost every desirable variety of Apple, Pears, Peach, Plum, Cherry, Apricot and Nectarine. Trees sent from their nurseries are universally admired for their vigorous, healthy, and youthful growth,—the best guarantee to the purchaser of a rapid advance to largeness of size, and beauty of form,—and it is the aim of the proprietors to be able to supply those who may favor them with their orders with a quality of trees always superior.

Among their varieties of the apple, they have many thousands of the justly celebrated Northern Spy, from seven to nine feet in height, which they will continue to supply, as heretofore, in an assortment with others, at the same rate. Where the selection is left to them, a portion of the Northern Spy is always included. They cultivate largely, also, the Hawley, the Green Sweeting, the Ladies' Sweeting, Peck's Pleasant, Sunair, Baldwin, Spitzenburg, in short, all of the best standard varieties, early and late. Among forty of the choicest kinds of pears, they have large sized and well formed trees of the Onondaga, Oswego Beurre, and Van Mon's Leon Le Clerc. Of cherries, peaches, plums, &c., their nurseries include, in large numbers, all that are most desirable. Purposely limiting their varieties of fruit trees to those only that are of approved worth, their Catalogue will be found to contain scarcely one that ranks below "first rate." Persons desiring to buy at wholesale, can be supplied on the most liberal terms, and can depend upon obtaining selections of the best varieties, as well as trees of the finest growth.

The proprietors have been much gratified by the constantly increasing demand for their trees, from the Eastern part of this state, and from New England; and in soliciting a continuance of favors from those quarters, they pledge themselves that the productions of their nurseries shall not forfeit the partiality which is so flattering bestowed upon them.

Much care is given to the packing of trees, so that they can be transported with safety to any distance.

Catalogues may be obtained at the apothecary store of M. W. Hanchett, between the Railroad and Syracuse House; and by post-paid application to the proprietors.

August 1.—3t.

THE HORTICULTURIST,

AND

Journal of Rural Art and Rural Taste.

EDITED BY A. J. DOWNING,

Author of "Fruits and Fruit Trees of America," "Landscape Gardening," "Cottage Residences," &c., &c.

THE first number of the fourth volume of this work, was issued on the 1st of this month (July.) and the future numbers will be issued regularly on the first of each successive month. It is devoted,

1. To GARDENING, in a thoroughly practical as well as scientific sense.
2. To THE DESCRIPTION AND CULTIVATION of FRUIT TREES.
3. To Gardening as an ART OF TASTE, embracing essays, hints and designs on Ornamental and Landscape Gardening.
4. To RURAL ARCHITECTURE, including designs for Rural Cottages and Villas, Farm Houses, Gates, Lodges, Ice Houses, Vineries, &c., &c.

In short, this periodical may be considered a continuation of the various works on Rural Subjects, by its Editor, which have already been so favorably received by the public. It is now his object to assist, as far as possible, in giving additional impulse to the progress of Horticulture, and the tasteful in Rural Life; subjects now so largely occupying all those interested in country pursuits.

All readers who have the least interest in rural affairs, should take a work which is exerting such a manifest influence upon the taste of the country. Its valuable correspondence furnishes from time to time the fruits of the experience of our most intelligent cultivators, and it is scarcely necessary to repeat, that Mr. Downing's labors in the department of Rural Architecture and embellishment give him substantial claims to public respect. Their effects are already seen in every part of the country, in improved cottages, gardens, green-houses, pleasure-grounds, fencing, &c. The present number opens with some capital suggestions concerning the improvement of Country Villages.—*Newark Daily Advertiser.*

TERMS—Three Dollars per vol. or year. Two copies for \$5—in advance.

☞ The back vols. can be furnished to new subscribers.

☞ All business letters to be addressed to the Proprietor, LUTHER TUCKER, Albany N. Y., and all communications to the Editor, A. J. DOWNING, Newburgh, N. Y.

Saxon Sheep.

THE subscribers having disposed of their pasture lands, now offer for their entire flock for sale. They will also offer about 70 Bucks and Buck Lambs at auction, at Syracuse, on Wednesday or Thursday, the 12th or 13th of September next, on the grounds of the State Fair. Of time, due notice will be given.

New Lebanon, N. Y., July 13, 1849. TILDEN & CO.

We refer to,

H. Blanchard & Co., Kinderhook Wool Depot.

Samuel Lawrence, Esq., Lowell.

Sanford Howard, Esq., Albany.

August 1.—2t.

Sale of Hereford Cattle.

THE Messrs. BINGHAM, of Vermont—brothers—propose to sell at public auction, on the Show Ground of the New-York State Fair at Syracuse, from ten to twenty head of Hereford Cattle, 3 years old and under—bulls and heifers. Our cattle—Herefords—to found our herd, were purchased of Messrs. Corning and Sothern, about three years ago. We have been disposed to give these cattle a fair trial, to see what their merits would prove to be, before offering them to the public. We have come to the conclusion that no race of cattle can compete with them when all their good qualities are taken into consideration. We are resolved to push ahead in the cultivation of the Herefords, as being a race, affording the best profits for keep and care, and proving themselves first class cattle for all the purposes of the breeder. They make a noble cross with the Durhams or their grades, as well as with the native stock, showing a great and decided improvement. We offer these cattle to the public with the strong conviction that they will prove a desirable acquisition to any herd.

PURE BRED MERINO SHEEP.

We shall also offer at private sale, a large lot of pure bred Merino Sheep, from imported sires. The breeders of sheep will do well to look over our flocks, before purchasing elsewhere. We sell no mongrels, or grades, or worthless sheep for great prices—but we mean to deal fairly with those who purchase of us, and sell them our best blooded sheep, at fair remunerating prices—so that they shall prove a decided improvement to the flocks with which they may be placed.

August 1.—2t.

Hereford Bull.

FOR sale by the subscriber, a full blood Hereford Bull, from the herd of Messrs. Corning & Sothern, Albany, N. Y. Said bull is six years old, and for symmetry of form, size, and the thrift and excellence of his stock, is probably unsurpassed by any bull in the State.

J. P. FAIRBANKS.

St. Johnsbury, Vt., Aug. 1.—3t.

Chemical Manure

Manufactured by "the George Bommer New-York Manure Co."

THIS manure is made chiefly of Fecal Matter from the sinks, in which is mixed a small portion of substances that are of themselves, powerful agents of vegetation, and possess the virtue to fix and retain the ammoniacal gas of the matter.

The great desideratum of the agriculturist has always been, to find out some process by which excrements might be solidified quickly, and all their fertilizing properties so strongly retained, that the manure may dissolve slowly and in proportion to the requirements of the plants, and therefore produce its effects for a time equal to that of farm manure.

This process was at length discovered by the French Chemists, and is now carried out with complete success in more than sixty of the large cities of France, where such manure factories are in full operation.

The "G. B. N. Y. M. C." has established a Factory on an extensive scale near the city of New York, in which they manufacture this kind of manure, and as the fecal matter can be obtained in this country at less expense than in France, the manure will not only be made stronger, but will be sold at a price less than in the French cities, this price being so established as to afford only the reasonable remuneration to which we are honestly entitled, the more so, as its manufacture is not of the most agreeable kind, and withal, troublesome and laborious.

The manufacturing department is under the special charge of GEORGE BOMMER, Esq., who has a perfect scientific and practical knowledge of manure matters generally; and the company has established a standard for the strength of its manure, from which it is intended not to deviate, so that its customers may at all times be furnished with an article really worth what they pay for it.

Our manure is an inodorous grain, and as the substances from which it is made contain of themselves all the elements necessary to the fertilization of the soil and growth of plants, it is extremely well adapted to such purposes.

To manure an acre highly, it requires 12 to 15 barrels, or 36 to 45 bushels spread broadcast. Applied in hills, half of the quantity will suffice. Its application is simple and easy, and printed instructions for its use will accompany each parcel sent to order.

We desire it to be remembered, that our manure has no similarity to another known under the name of "poudrette," although the principal component of ours (the fecal matter) is the same as that which is used in the poudrette, in a much less proportion; our auxiliary substances, as well as our manufacturing processes are altogether of a different nature and kind.

It belongs not to us to eulogise further, the quality of our manure; what we desire at present is, to call upon the members of the agricultural community, to try it! and we have reason to assure them, that they will find it the most profitable manure they have ever used.

PRICES, TAKEN AT THE FACTORY:

37½ cents per bushel, without package;
50 cents per bushel, packed in Barrels, or
\$1.50 per Barrel, package included.

Orders addressed to the above Company, at their office, 72 Greenwich St., New-York, will be promptly attended to.

By order of the Board of Trustees,

New-York, Jan., 1849.—if GEO. BOMMER, Director.

☞ The factory will be in full operation early in the spring, and manure can be had in April next, and at any time afterwards.

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School of Applied Chemistry,

Yale College, New Haven, Ct.

B. SILLIMAN, Jr., Professor of Chemistry applied to the Arts.
J. P. NORTON, Professor of Agricultural Chemistry.

THE Laboratory in this department is open during nine months in the year for instruction in the analysis of soils, minerals, ores, &c.

During the summer and autumn terms, there will be lectures on Mineralogy, Geology, Natural Philosophy, Elementary Chemistry, and other useful branches of Natural History.

The annual course of lectures on Agricultural Chemistry, by Prof. NORTON, will commence soon after the middle of January, and continue till about the first of April, at the rate of four or five lectures in each week.

These lectures are intended to be delivered in a form quite intelligible to those who never turned their attention to chemical studies. The great principles of Improved Agriculture will be illustrated and explained during the progress of this course in such a manner as to be understood by all. Tickets for the course \$10.

Students in the laboratory have glass, chemicals, balances, and other apparatus furnished, and pay \$20 per month. Analyses of minerals, soils, &c., made on reasonable terms.

For further particulars apply to either of the Professors.

New-Haven, Ct., Sept. 1, 1849.—5t.

Farm School.

THE Mount Airy Agricultural Institute will commence its winter session on the first Thursday of October next.

The course of instruction pursued is such as to insure to the student a thorough knowledge of the *Natural Sciences*; collateral with a full practical course on the farm, in all the labor of which the students participate.

For further particulars address the Principal.

JOHN WILKINSON,
Germantown, Pa.

Sept. 1, 1849.—2t.

Albany Steam Mill.

THE subscriber begs leave to announce to his friends and the public, that he has opened a store, No. 9 Hudson street, for the sale of Flour, &c. Having erected a Steam Mill on the premises, enables him to furnish the following articles, fresh ground, at all times, viz: Graham, Rye, Buckwheat and Rice Flour. Wheat Grits, Farina, Pearl Barley, Split Peas, Corn meal and Hominy of all sizes, from North Carolina and Northern corn. Also, a very superior article of steam refined Table and Dairy Salt. A share of patronage is earnestly solicited.

C. N. BEMENT

Albany, Sept. 1, 1849.—1t.

White Dorkings.

THE subscriber has on hand, a few choice White Dorking fowls which he will sell at fair prices—bred by himself. As far as his knowledge goes, this variety of the Dorkings is more sought after, both in England and in this country, on account of their color.

L. DURAND.

Derby, Ct., Sept. 1, 1849.—2t.*

Allen's Improved Railroad Horse Power, &c.

GENTLEMEN—In reference to H. L. EMERY's advertisement, page 264 of the last number of *The Cultivator*, we can only say, that we think our Railroad Horse Power, Overshot Thresher and Separator quite equal in the principles of its movement to Wheeler's, and stronger and better made than any ever manufactured by its patentee. And furthermore, we are willing to refer the merits of the two machines to the decision of any disinterested committee of mechanics and farmers to decide the question.

We have never sold our machines except upon their own merits, and at the same time stating distinctly to the purchasers what they were; we have also done the same by Wheeler's, and still do so. If H. L. Emery means in his advertisement that we have done the contrary, he asserts what is untrue. We utterly scorn any thing of the kind.

Very respectfully yours,
A. B. ALLEN & CO.,
189 & 191 Water street, New York.

To the Editors of The Cultivator,
Albany, N. Y.

Sept 1, 1849—1t.

Wheeler's Patent Railroad Horse Powers and Threshing Machines.

THE subscribers having been appointed agents for selling the above celebrated machines for the city and vicinity of New-York, in place of A. B. Allen & Co., (who have heretofore had the sale of the same,) they solicit the attention of those wishing to purchase.

The farmers of Long Island can be supplied with a machine equally well adapted for their use, and which is afforded at the same prices, without any extra charge for premiums or Patent rights. All are warranted to give satisfaction, or are subject to be returned and the full purchase money refunded. A supply constantly on hand at their Warehouses, Nos. 187 Water Street and 195 Front St., New-York.

JOHN MAYHER & CO.

Sept 1.—1t.

Mediterranean Wheat.

200 BUSHELS of this variety of Wheat for sale, being a portion of an excellent crop of Winter Wheat, raised for the fifth year on the same farm in Greene county, N. Y.

It is two weeks earlier than the Hutchinson wheat, and is always harvested before the Rye crop is ready for the sickle. This season it has done better than heretofore, notwithstanding it has improved in quality and yield.

The grain is large, of light color, and weighs, (this crop through) 64 pounds per bushel. It has never been affected by the Weevil, (or wheat midge.) Fly or Rust. This season, the yield was 23 bushels to each bushel sown.

For sale at the Albany Agricultural Warehouse & Seed Store, Nos. 369 and 371 Broadway, Albany, N. Y.
Sept. 1—2t. By HORACE L. EMERY.

Horses for the State Fair.

IT is my present intention to visit the Agricultural State Fair, to be held at Syracuse, on the 11th, 12th and 13th days of September next, and take with me for exhibition, my Morgan stallion, a colt of the old Gifford Morgan, 6 years old, chestnut color, very closely resembling his sire. Also, one or two brood mares of the Morgan stock.

C. BLODGETT.

Chelsea, Vt., Sept. 1, 1849.—1t.*

Merino Sheep and Devon Cattle.

THE subscriber will offer for sale at the New-York State Fair, at Syracuse, about 100 rams, of pure Merino blood—all bred by himself. Also, several head of Devon cattle—bulls, cows, and heifers.

JACOB N. BLAKESLEE.

Watertown, Ct., Sept. 1.—1t.

Devon Cattle for Sale.

I OFFER for sale, a Devon bull and oow, four years old, from the celebrated herd of George Patterson, Esq., of Maryland. Finer specimens cannot, probably, be found anywhere—certainly not in the West. I will sell them, here, at the same price Mr. Patterson asks for similar stock at his farm in Maryland. The cow has a bull calf by her side.

ISAAC DILLON.

Zanesville, Ohio, Sept. 1, 1849.—1t.*

THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by
LUTHER TUCKER, PROPRIETOR.

LUTHER TUCKER & SANFORD HOWARD, Editors.

\$1 per ann.—7 copies for \$5—15 for \$10.

All subscriptions to commence with the volume, (the Jan. No.) and to be PAID IN ADVANCE.

All subscriptions, not renewed by payment for the next year, are discontinued at the end of each volume.

The back vols. can be furnished to new subscribers—and may be obtained of the following Agents:

NEW-YORK—M. H. NEWMAN & Co., 199 Broadway.

BOSTON—J. BRECK & Co., 52 North Market-st., and E. WIGGS,

7 Congress-st.

PHILADELPHIA—G. B. ZIEBER.

ADVERTISEMENTS—The charge for advertisements is \$1, for 12 lines, for each insertion. No variation made from these terms.